Preventive Interventions to Reduce Youth Involvement in Gangs and Gang Crime in Low- and Middle-Income Countries: A Systematic Review

Angela Higginson, Kathryn Benier, Yulia Shenderovich, Laura Bedford, Lorraine Mazerolle and Joseph Murray
### Colophon

<table>
<thead>
<tr>
<th><strong>Title</strong></th>
<th>Preventive Interventions to Reduce Youth Involvement in Gangs and Gang Crime in Low- and Middle-Income Countries: A Systematic Review</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Institution</strong></td>
<td>The Campbell Collaboration</td>
</tr>
<tr>
<td><strong>Authors</strong></td>
<td>Angela Higginson, Kathryn Benier, Yulia Shenderovich, Laura Bedford, Lorraine Mazerolle, Joseph Murray</td>
</tr>
<tr>
<td><strong>DOI</strong></td>
<td>10.4073/csr.2015.18</td>
</tr>
<tr>
<td><strong>No. of pages</strong></td>
<td>176</td>
</tr>
</tbody>
</table>

| **Citation** | Higginson A, Benier K, Shenderovich Y, Bedford L, Mazerolle L, Murray J. Preventive Interventions to Reduce Youth Involvement in Gangs and Gang Crime in Low- and Middle-Income Countries: A Systematic Review. Campbell Systematic Reviews 2015:18. DOI: 10.4073/csr.2015.18 |
| **ISSN** | 1891-1803 |
| **Copyright** | © Higginson et al. |

This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

| **Roles and responsibilities** | Content: Angela Higginson, Joseph Murray, Lorraine Mazerolle, Kathryn Benier, Laura Bedford. Systematic review methods: Angela Higginson, Joseph Murray, Yulia Shenderovich. Statistical analysis: Angela Higginson. Information retrieval: Yulia Shenderovich, Kathryn Benier, Laura Bedford |
| **Editors for this review** | Editors: Birte Snilstveit, David Wilson |
| **Managing editor** | Emma Gallagher |

| **Sources of support** | Internal funding: Support provided by the Institute for Social Science Research, the University of Queensland, and the ARC Centre of Excellence in Policing and Security. External funding: Externally funded by USAID through 3ie (International Initiative for Impact Evaluation, Inc.) (SR/1117). Funding for the broader database searching (Murray et al., 2013) was provided by the Wellcome Trust [089963/Z/09/Z] and with the support of the Bernard van Leer Foundation. |

| **Declarations of interest** | The authors have no vested interest in the outcomes of this review, nor any incentive to represent findings in a biased manner. |

| **Corresponding author** | Dr Angela Higginson |
| **School of Social Science** | The University of Queensland |
| **St Lucia campus** | Brisbane AUSTRALIA 4072 |
| **E-mail** | a.higginson@uq.edu.au |

Full list of author information is available at the end of the article
The Campbell Collaboration (C2) was founded on the principle that systematic reviews on the effects of interventions will inform and help improve policy and services. C2 offers editorial and methodological support to review authors throughout the process of producing a systematic review. A number of C2's editors, librarians, methodologists and external peer-reviewers contribute.

The Campbell Collaboration
P.O. Box 7004 St. Olavs plass
0130 Oslo, Norway
www.campbellcollaboration.org
# Table of contents

**PLAIN LANGUAGE SUMMARY**  
**EXECUTIVE SUMMARY**  
Background  
Objectives  
Search Methods  
Selection Criteria  
Data Collection and Analysis  
Results  
Authors’ Conclusions  

**1 BACKGROUND**  
1.1 The Issue  
1.2 The Interventions  
1.3 How the Intervention may affect Gang Membership  
1.4 Why it is Important to do the Review  

**2 OBJECTIVES**  

**3 METHODS**  
3.1 Criteria for Considering Studies for This Review  
3.2 Search Methods for Identification of Studies  
3.3 Data Collection and Analysis  
3.4 Method of Synthesis for Objective 2  
3.5 Differences between protocol and review  

**4 RESULTS OF THE SEARCH**  
4.1 Excluded studies  

**5 RESULTS: SYNTHESIS OF INTERVENTION EFFECTIVENESS**  

**6 RESULTS: REVIEW OF REASONS FOR IMPLEMENTATION SUCCESS OR FAILURE**  
6.1 Description of Studies  
6.2 Methodological Quality of Included Studies  
6.3 Synthesis of Results
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>7.1</td>
<td>Summary of Main Results</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>7.2</td>
<td>Overall Completeness and Applicability of Evidence</td>
<td>53</td>
</tr>
<tr>
<td></td>
<td>7.3</td>
<td>Quality of the Evidence</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>7.4</td>
<td>Limitations and Potential Biases in the Review Process</td>
<td>55</td>
</tr>
<tr>
<td></td>
<td>7.5</td>
<td>Agreements and Disagreements with Other Studies or Reviews</td>
<td>56</td>
</tr>
<tr>
<td>8</td>
<td>8.1</td>
<td>Implications for Practice and Policy</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>8.2</td>
<td>Implications for Research</td>
<td>57</td>
</tr>
<tr>
<td>9</td>
<td>9.1</td>
<td>References to Included Studies</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>9.2</td>
<td>References to Excluded Studies &amp; Reasons for Exclusion</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td>9.3</td>
<td>References to Studies Awaiting Classification</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>9.4</td>
<td>References to Ongoing Studies</td>
<td>103</td>
</tr>
<tr>
<td></td>
<td>9.5</td>
<td>Additional References</td>
<td>103</td>
</tr>
<tr>
<td>10</td>
<td>10.1</td>
<td>INFORMATION ABOUT THIS REVIEW</td>
<td>109</td>
</tr>
<tr>
<td>11</td>
<td>11.1</td>
<td>APPENDICES</td>
<td>113</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Appendix A: Search strategy structure</td>
<td>113</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Appendix B: Document coding protocol</td>
<td>153</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Appendix C: IDCG Risk of Bias Tool</td>
<td>161</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Appendix D: Critical appraisal tool</td>
<td>170</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Appendix E: Annotated bibliography of studies included in thematic synthesis</td>
<td>171</td>
</tr>
</tbody>
</table>
Plain Language Summary

Background

Youth gang membership and the crime that it generates is a serious problem in low- and middle-income countries, involving many thousands of young people and resulting in billions of dollars of crime, loss of life, and social disruption. This review assessed the evidence on preventive interventions that focus on increasing social capacity to reduce gang membership or rehabilitate gang members outside of the criminal justice system.

Approach

We conducted an extensive search of the published and unpublished academic literature, as well as government and non-government organization reports to identify studies assessing the effects of preventive youth gang interventions in low- and middle-income countries. We also included studies assessing the reasons for success or failure of such interventions and conducted a thematic synthesis of overarching themes identified across the studies.

Results

We did not identify any studies assessing the effect of preventive gang interventions in LMICs using an experimental or quasi-experimental design. Four studies evaluating the reasons for implementation success or failure were included. The limited number of studies included in the review suggests that the findings identified here should provide a direction for future research, rather than any substantive or generalizable claim to best practice. Specifically, the synthesis of reasons for implementation success or failure identified five factors that may be important for intervention design and implementation. Preventive gang interventions may be more likely to be successfully implemented when they include:

- a range of program components that appeal to youth,
- active engagement of youth, where their agency is embraced and leadership is offered,
- programs that offer continuity of social ties outside of the gang, and
- a focus on demobilization and reconciliation.
Implications

The lack of evidence prevents us from making any conclusions about which interventions are most effective in reducing youth involvement in gangs. To identify programs that work and those that do not researchers, practitioners and commissioners should begin to rigorously evaluate the effectiveness of preventive gang programs in the field.
Executive Summary

BACKGROUND

Youth gangs are frequently associated with high levels of crime and violence in low- and middle-income countries – creating fear, reducing social cohesion, costing billions of dollars in harm and many thousands of lives diverted to criminality. However, youth gangs are also seen to fill a void, as a means of overcoming extreme disadvantage and marginalization. Preventive interventions focus on capacity building and social prevention, and are designed to work proactively to stop crime before it occurs, either by preventing youth from joining gangs or by reducing recidivism by rehabilitating gang members outside of the criminal justice system. By addressing the causes of youth gang membership, these interventions seek to reduce or prevent gang violence.

OBJECTIVES

There were two key objectives to this review.

1. To review the evidence on the effectiveness of interventions designed to prevent youth involvement in gangs and gang crime in low- and middle-income countries. This objective has two parts:
   a. to summarize the overall effectiveness of interventions, and
   b. to examine variability in effectiveness across different interventions and populations.
2. To identify the reasons why the implementation of preventive interventions to reduce youth involvement in gangs and gang crime may fail or succeed in low- and middle-income countries.

SEARCH METHODS

The search for eligible studies was conducted in August and September 2013, as part of a broader project that systematically reviewed literature on conduct problems and crime in low- and middle-income countries (LMIC). The search strategy included published and unpublished literature with no date constraints. The search was conducted across 17 academic databases, 8 individual journals, and 10 grey
literature repositories. There were no language restrictions on the eligibility of
documents, and the search was conducted in seven languages: English, French,
Chinese, Arabic, Russian, Spanish and Portuguese. The geographic location of
studies was limited to low- and middle-income countries, defined as such by the
World Bank at least 50 per cent of the time since 1987, when the recordings start.

SELECTION CRITERIA

Studies were eligible for the review of effectiveness if they: (1) reported on youth
gangs; (2) included participants between 10 and 29 years old; (3) were located in a
LMIC; (3) assessed a preventive intervention; and (4) used an eligible quantitative
study design.

Studies were eligible for the review of reasons for implementation success or failure
if they: (1) reported on youth gangs; (2) included participants between 10 and 29
years old; (3) were located in a LMIC; (4) assessed a preventive intervention; (5)
evaluated the reasons for success or failure; (6) reported on the sampling strategy;
(7) reported on data collection; and (8) reported on the type of analysis.

DATA COLLECTION AND ANALYSIS

A team of reviewers assessed each title and abstract for preliminary eligibility, which
was confirmed during full-text screening. No studies were eligible for the review of
effectiveness. For the review of reasons for implementation success or failure, we
recorded any evidence of barriers or facilitators of implementation that were
identified by the study authors. None of the four studies that were eligible for the
thematic synthesis were graded as having low study quality. The review contains a
description of each intervention, a summary of the authors’ findings and conclusions
about barriers and facilitators of implementation success, and a thematic synthesis
of overarching themes identified across the studies.

RESULTS

No studies were identified for the review of effectiveness. Four studies were eligible
for the review of reasons for implementation success or failure. The synthesis of
reasons for implementation success or failure in the four studies identified five
factors that may be important for intervention design and implementation. The
limited evidence from the thematic synthesis indicates that preventive gang
interventions may be more likely to be successfully implemented when they include:

- a range of program components that appeal to youth,
- programs that offer continuity of social ties outside of the gang,
- a recognition that ongoing violence and gang involvement can severely limit
  successful implementation, and
• active engagement of youth, where their agency is embraced and leadership is offered.

AUTHORS’ CONCLUSIONS

There is a serious lack of rigorous evaluations of preventive gang interventions in low- and middle-income countries from which to draw conclusions about best-practice. Yet there are a large number of preventive gang programs currently in the field, and many studies that assert their effectiveness. We urge the research and practitioner communities to develop a program of rigorous evaluation, both quantitative and qualitative, in order to establish a benchmark for best practice and to systematically capture important learnings from a range of low- and middle-income country contexts.
1 Background

1.1 THE ISSUE

The involvement of young people in gangs and gang crime is not only an issue in high-income nations, but also across low- and middle-income countries. Research demonstrates the existence of youth gangs in Africa, Asia, Central and South America, with much of the evidence coming from Latin American nations (Decker & Pyrooz, 2010; Gatti, Haymoz & Schadee, 2011). Although official and academic estimates of gang membership differ, estimates put the number of gang members in Central America at up to 200,000 (UNODC, 2007), and research suggests that over 85,000 people are members of gangs in El Salvador, Guatemala and Honduras (Seelke, 2013). In South Africa, it is estimated that there are up to 100,000 members in the Western Cape alone (Reckson & Becker, cited in Decker & Pyrooz, 2010). Gang activities – and particularly those of youth gangs – contribute significantly to the violent crime problem in low- and middle-income countries. Youth gangs are also increasingly associated with activities of established criminal gangs such as trafficking in drugs, arms and humans (Organization of American States [OAS], 2007). The cost of violence in Latin America is estimated at approximately 14.2 per cent of GDP – almost three times the proportion of GDP reported in industrialized countries (Seelke, 2013). Gang violence makes up a significant proportion of this cost: the annual cost of violent crime in El Salvador for instance is reported at US$ 1.7 billion, with gang violence accounting for 60 per cent (Seelke, 2013).

On the one hand, research indicates that youth gang violence can undermine social cohesion in communities, creating fear amongst residents (see Lane & Meeker, 2003; Seelke, 2013; Washington Office of Latin America [WOLA], 2006) and results in people avoiding certain areas of neighborhoods known to be gang areas. George Tita and his colleagues argue that these places develop an appearance of visible disorder as non-gang activity in the neighborhood is abandoned (Tita, Cohen, & Engberg, 2005). On the other hand, it can be argued that youth gangs provide a social and economic alternative in the presence of youth displacement, discrimination, and extreme social and economic inequality (Higginson & Benier, 2015).

Gang violence and crime can occur between gangs and non-gang individuals, as well as between or within gangs. Violence may be used to defend or expand gang turf, recruit new members, keep members from leaving, exclude or remove undesired members, exercise
revenge or seek redress for actual or perceived wrongs, enhance perceptions of power and invincibility, gain respect or dominance over others, and enforce the gang rules (Pacheco, 2010). Although there are significant negative repercussions in the life course for members of youth gangs (Cruz, 2007; Davies & MacPherson, 2011; OAS, 2007; WOLA, 2006), for many young people who lack other opportunities, gangs offer a sense of belonging and purpose (Howell, 2012; Tobin, 2008).

Researchers often contest a uniform definition of a youth gang, as it varies by time and place (Howell, Egley, & O’Donnell, n.d.). Notwithstanding these debates, the literature typically describes a youth gang as: comprising between 15 to 100 members, generally aged 12 to 24; having members that share an identity linked to name, symbols, colours or physical or economic territory; having members and outsiders that view the group as a gang; having some permanence and degree of organisation; and involvement in an elevated level of criminal activity (Decker & Curry, 2003; see also Esbensen, Winfree, He, & Taylor, 2001; Howell et al., n.d.; Huff, 1993; Miller, 1992; Rodgers, 1999; Spergel, 1995; Theriot & Parker, 2008). There have been significant efforts amongst academics and policy makers to reach agreement on the definition of a youth gang. The “Eurogang Working Group” (see The Eurogang Project, 2012) consensus definition is as follows: “A street gang (or troublesome youth group corresponding to a street gang elsewhere) is any durable, street-oriented youth group whose involvement in illegal activity is part of its group identity” (Weerman et. al., 2009, p.20). A youth gang is differentiated from an adult gang if the majority of the gang members are aged between 12 and 25 (Weerman et. al., 2009).

It is important to recognize that youth gangs do not emerge in a vacuum. Indeed, youth gangs appear most likely to emerge as a response to entrenched and deeply problematic issues of social exclusion and extreme inequality, often within a context of rapid urbanization and social disorganization. Youth gangs can provide a sense of identity and belonging for marginalized youth, in the absence of a legitimate prosocial identity (Kwaghga, 2014). The General Secretariat of the Organization of American States (OAS) describes the social function that the gang plays for its members as a means to overcome “extreme poverty, exclusion, and a lack of opportunities” (OAS, 2007, p.5). The OAS further elaborates on the role of the gang using a rights-based approach:

"Youth gangs represent a spontaneous effort by children and young people to create, where it does not exist, an urban space in society that is adapted to their needs, where they can exercise the rights that their families, government, and communities do not offer them. Arising out of extreme poverty, exclusion, and a lack of opportunities, gangs try to gain their rights and meet their needs by organizing themselves without supervision and developing their own rules, and by securing for themselves a territory and a set of symbols that gives meaning to their membership in the group. This endeavor to exercise their citizenship is, in many cases, a violation of their own and others’ rights, and frequently generates violence and crime in a vicious circle that perpetuates their original exclusion. This is why they cannot reverse the situation that they were born into. Since it is primarily a male phenomenon, female gang members
Youth gangs are indeed “primarily a male phenomenon” (OAS, 2007, p.5) and can be seen as a performance of masculinity (Glaser, 1998; Kynoch, 2007; Walsh & Mitchell, 2006). Rapid cultural change due to urbanization, for example, can undermine traditional masculine roles, leaving a cultural vacuum for disenfranchised young men, and few legitimate outlets to enact masculinity and gain status. If legitimate or traditional models of masculinity are seen as out-of-reach, youth gangs can foster “pride, brotherhood, solidarity, challenge, and success” through illegitimate means such as violence, crime, and substance abuse (Aumair & Warren 1994: 6). Youth gangs may provide a sense of masculine identity in a socially disorganized world where legitimate avenues to masculinity are not available for marginalized young men (Higginson & Benier, 2015).

Youth gang violence is a problem that is widespread throughout the developing world. Not all youth gangs are involved in crime or violence; however it is understood that gangs evolve along a continuum towards criminality and violence, from youth gangs that engage in non-criminal activities to youth gangs actively involved in serious violent behaviour (OAS, 2007). Gang types have been described on a continuum “from weakly organized playgroups to more clearly organized supergangs” (Tobin, 2008, p.62).

It is well established that gang-involved youth commit more crime than non-gang-involved youth, and violence has been described as central to gang membership (Klein & Maxson, 2006). Overall, however, the offending of gang members tends to be generalist, rather than specializing in violent crime (Klein & Maxson, 2006). In order to reduce the prevalence of youth gang violence, it is important not only to target the violence directly but also to target the process of young people joining youth gangs.

1.2 THE INTERVENTIONS

Responses to the problem of youth gang violence in low- and middle-income countries can be grouped into one of two categories: suppression or prevention. Suppression approaches aim to combat gang violence in a reactive way that attempts to stop the criminal behavior reoccurring, generally using legislative or policing resources. By contrast, prevention programs focus on risk reduction, capacity building, and social prevention and are designed to work proactively to stop gang crime before it occurs, either by preventing youth from joining gangs (primary and secondary prevention) or by rehabilitating gang members outside of the criminal justice system (tertiary prevention1) (Esbensen, 2000; Van Der Merwe & Dawes, 2007).

---

1 Tertiary prevention can also be conceptualised as treatment (SAS, 2010).
Although it can be argued that punishment and the subsequent deterrent effects activated by suppression activities aim to prevent future crime, we distinguish between a punitive deterrence and a capacity building preventive framework. Much of the literature on risk factors for youth gang membership highlights that disenfranchised and marginalized youth are more likely to be attracted to youth gangs as an alternative social framework. We therefore focus on those interventions that seek to reduce risk by increasing social support and social capacity, and therefore exclude suppression activities. Whilst acknowledging the many suppression strategies that are enacted to combat youth gang violence, this review will focus on interventions that use primary, secondary or tertiary prevention strategies.

Primary prevention strategies are applied most broadly to the entire population who are potentially able to join gangs (Esbensen, 2000); in this case, all young people. Primary prevention programs include general community and school based programs to enhance the life skills and resilience of adolescents. An example of a primary prevention program is the Gang Resistance Education and Training (GREAT) program, a school-based curriculum run by law enforcement officers that uses elements of cognitive-behavioural training, social skills development and conflict resolution to improve young people’s resistance to gang membership (Esbensen & Osgood, 1999). This program was developed in North America, and has been delivered in Belize, Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, and Panama (GREAT, 2013).

Secondary prevention strategies target those individuals who are identified as being at higher risk of joining gangs\(^2\) (Esbensen, 2000). Many of these programs provide a mix of education, therapeutic services, and recreational opportunities. An example of a program that has a secondary prevention component is the Por Mi Barrio Outreach Centres, a program implemented in Central America by the United States Agency for International Development (USAID) that focuses on creating a safe space for youth to engage in recreational activities (USAID, 2010a). Further examples of secondary prevention programs that provide skills training for at-risk youth include: the Edutodos program in Honduras, which provides basic education for at-risk youth; the Civil Rights and Values for Youth program in Honduras, that focuses on participatory citizenship and problem solving skills for at-risk youth; and the Community Empowerment and Transformation project (COMET) in Jamaica, that provides micro-entrepreneurship opportunities for at-risk youth (USAID, 2010b). In South Africa, examples of secondary prevention interventions include the Usiko program, funded by NGOs, businesses and communities, which uses ‘rites of passage’ programs for young offenders and at-risk youth, and the Chrysalis Academy, funded by the Western Cape Department of Community Safety, an intensive program that provides training and support for a five-year period with the aim of transforming at-risk youth into community leaders (Ward & Cooper, 2012).

\(^2\) We will hereafter refer to the subset of youth who are at higher risk of joining gangs as “at-risk youth.”
Tertiary prevention strategies target youth who have already become involved in gangs or criminal behavior (Esbensen, 2000). Tertiary prevention programs are designed to facilitate exit from the gang and often seek to reintegrate gang members into society pro-socially, by focusing on rehabilitation and education. An example of a tertiary prevention program is the Medellin program in Colombia, which provides at-risk youth with access to long-term employment programs through state and private institutions on the proviso that gang members withdraw from their gang (Cooper & Ward, 2008). Tertiary prevention programs in South African prisons include the Reintegration and Diversion for Youth (READY) program, the Tough Enough Program, and the Destinations Program (Ward & Cooper, 2012). Tertiary programs can also include negotiations and gang truces, as these strategies aim to engage with current gang members to reduce the levels of violence occurring within or between gangs, even if they do not result in the participants completely disengaging from a gang framework.

1.3 HOW THE INTERVENTION MAY AFFECT GANG MEMBERSHIP

The predictors of gang membership are routinely categorized across five domains: individual, peer, family, school and community (Decker et al., 2013; Hawkins et al., 2000; Howell, 2012; Howell & Egley, 2005; Katz & Fox, 2010; Klein & Maxson, 2006; O’Brien et al., 2013; Tobin, 2008). Research in high-income countries demonstrates that the predictors of gang involvement cut across all five domains, that youth with multiple risk factors have a proportionately higher risk of gang involvement, and that those youth with risk factors in multiple domains have further increased likelihood of gang involvement (Decker et al., 2013; Howell & Egley, 2005). Preventive interventions seek to target these predictors in order to disrupt the developmental pathway to gang membership.

Building on Thornberry and colleagues’ developmental framework of gang membership (Thornberry et al., 2003), Howell and Egley (2005) propose a developmental perspective that incorporates predictors from early childhood through to adolescence. The model is illustrated in Figure 1, and can be viewed as a ‘life-cycle’ approach to gang prevention.

Gang membership is theorized to be a culmination of interrelated structural and process factors, with certain factors being most important at varying stages in the life-course. The model suggests that individual, community and structural family characteristics influence early pro-social behaviours and pro-social bonds. In an interactive feedback relationship, the model suggests that antisocial behaviours decrease pro-social friendships and in turn increase the impact of negative peer attachments and the risk of delinquent behaviours. These social and structural factors, in combination with negative life events, negative school experiences and a lack of school attachment, may increase the attractiveness of gang membership, not only for the most desperate in a community, but also for more ‘ambitious’ youth who see gangs as providing a positive alternative pathway.
Figure 1: Logic model of predictors of gang membership (Source: Howell & Egley, 2005)
Interventions to prevent youth gang membership can act on any of the five domains of risk factors, and at any of the developmental stages. The logic of preventive interventions is that they disrupt the developmental pathway to gang formation across any of the risk domains of individual, peer, family, school and community. There is no standard approach to preventive interventions, and as such, there is considerable variety in the programs implemented. Scholars suggest, however, that due to the cumulative and interactive impact of risk factors, interventions that address risk factors across multiple domains are likely to be the most successful (O’Brien et al., 2013; Klein & Maxson, 2006; Esbensen et al., 2009). The success or otherwise of preventive interventions can be measured both by the direct outcome of gang membership, and by the impact on gang-related crime, and we argue that the monitoring and evaluation of gang prevention programs using such outcomes is extremely important for the ongoing development of successful strategies. Figure 2 represents the relationship between categories of youth targeted by interventions and the outcomes and impacts that can be used as measurements of intervention effectiveness.

1.4 WHY IT IS IMPORTANT TO DO THE REVIEW

Two systematic reviews previously published in the Campbell library consider gang involvement for children and young people (Fisher, Montgomery, & Gardner, 2008a, 2008b), focusing on cognitive-behavioral and opportunities provision interventions to prevent gang involvement – interventions predominantly utilized in high-income nations. These reviews were essentially empty reviews as they did not identify any studies that met all of their inclusion criteria. Another review of comprehensive interventions designed to reduce gang-related crime was conducted by the Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre, 2009). This also focused on high-
income countries, and found that there was a small positive but not statistically significant effect of comprehensive intervention in reducing gang crime.

We propose that there are clear differences in the application and success of gang prevention programs between those implemented in high income (predominantly high income) nations, and those implemented in low- and middle-income nations. We suggest that the motivations for joining and remaining with a gang may differ across regions for a variety of reasons, including the extreme poverty and lack of services found in some low- and middle-income countries, problems with police corruption and the rule of law, and because many low- and middle-income countries experience – or have experienced – some form of war or conflict (for example, Colombia, Nicaragua and South Africa). Post-conflict societies can provide fertile ground for gang formation and gang violence. In some post conflict nations, people live within an existing culture of violence, experiencing a low sense of citizen security and distrust of authorities alongside poor economic outlooks and easy access to firearms and drugs (Cruz, 2007; Davies & MacPherson, 2011). Whilst we acknowledge that there will be many similarities in youth gangs globally, across themes such as disadvantage, disenfranchisement, and structural change, we argue that the cultural frameworks, poverty, exclusion, and social disorganization seen in many low- and middle-income countries is qualitatively different from that seen in high-income countries, and that these differences justify the review’s focus on the global south.

Given the different antecedents, motivations, and social, economic and political conditions that give rise to gang formation and gang violence, a review on interventions aimed at combating youth gang formation and violence in countries classified as low- and middle-income by the World Bank will address some of the identified gaps in the research literature (World Bank, 2013).

This review aims to inform not only the academic literature on the effectiveness of preventive interventions, but also to provide clear points for consideration for policy makers’ and practitioners’ deliberations regarding appropriate interventions for implementation. Preventive gang interventions in low- and middle-income countries are funded and implemented by NGOs, government agencies, international aid agencies, and community organizations. This systematic review has been funded by the United States Agency for International Development (USAID), with the aim of informing discussion on best practice in youth gang interventions. USAID supports a variety of preventive anti-gang programs in Latin America and the Caribbean, including both primary and secondary prevention programs, and argues that evaluation is important to improve programs and build support for crime prevention programs (USAID, 2010b). This review, and its tentative findings, highlights the urgent need for further rigorous evaluation aimed at understanding the etiology of youth gangs, youth gang violence and prevention efforts in a range of LMIC contexts.
2 Objectives

There are two key objectives to this review.

1. The first objective is to review the evidence on the effectiveness of interventions designed to prevent youth involvement in gangs and gang crime in low- and middle-income countries. This objective has two parts:
   a. to summarize the overall effectiveness of interventions, and
   b. to examine variability in effectiveness across different interventions and populations.
2. The second objective of the review is to identify the reasons why the implementation of preventive interventions to reduce youth involvement in gangs and gang crime may fail or succeed in low- and middle-income countries.
3 Methods

3.1 CRITERIA FOR CONSIDERING STUDIES FOR THIS REVIEW

The methodology for this review is based on the protocol published by the Campbell Collaboration Library of Systematic Reviews (Higginson et al., 2014b).

3.1.1 Characteristics of the studies relevant to the objectives of the review

To be included in the review, a study must have either evaluated the impact of preventive gang interventions using an appropriate quantitative methodology (Objective 1) or evaluated the reasons for implementation success or failure of preventive gang interventions using either a quantitative or qualitative methodology (Objective 2). The review was conducted alongside a broader project on conduct problems and crime in low- and middle-income countries (Murray et al., 2013) and utilizes the broad set of studies identified in that project, with further refinement during screening to ensure that the studies are relevant to preventive gang interventions.

3.1.2 Types of participants

This review focuses on preventive interventions aimed at reducing involvement in youth gangs and youth gang violence. Whilst research suggests the majority of youth gang members are 12 to 24 years of age (Howell et al., n.d.; Huff, 1993; Rodgers, 1999; Seelke, 2013), we acknowledge that the definitions of youth vary by country, and that a strict age cut-off may not be appropriate. We therefore extended the age range to include studies where the participants were aged between 10 and 29, in part because formal definitions of youth vary across countries, and in part to ensure that the age range was broad enough to ensure that tertiary prevention programs targeting current and ex gang members were not excluded.

We acknowledge that there is no consensus definition of a youth gang; therefore we took a broad approach and included any intervention where (1) the target group met the Eurogang definition of youth gangs, "a street gang (or troublesome youth group corresponding to a street gang elsewhere) is any durable, street-oriented youth group whose involvement in illegal activity is part of its group identity" (Weerman et. al., 2009, p.20), (2) the target group was identified by the authors as members of a youth gang or equivalent (for example, pandilla, maras, and so forth), or (3) involvement in youth gangs was a measured outcome of the study.
Youth is a key defining characteristic of youth gangs. Indeed, it is one of the core conceptual distinctions between a gang and a youth gang. We specifically excluded groups described as militia, civil war combatants, organized crime gangs, terrorist gangs and piracy gangs, unless the groups were described as being comprised of children, adolescents, youth, or young people aged 10 to 29. We note that these groups, as described in the literature, commonly consist of adults or are a mixed group of adults and youth, or the age of the group members is not defined (see for example Humphreys & Weinstein, 2007; Gilligan et al., 2012). We recognize that in post-conflict societies in particular, that ex-combatants are particularly vulnerable to gang membership in the aftermath of civil unrest and that their vulnerabilities to involvement in violent crime may be similar to that seen in youth gang members; however it is only those group members aged under 30 who would meet the definition of a potential youth gang member.

As noted in section 1.4, we suggest that there may be gang formation push and pull factors in low- and middle-income countries that are substantively differences from those seen in high-income countries. We therefore focus on interventions to reduce youth gang membership in low- and middle-income countries, and only included studies from countries that were classified by the World Bank as low- and middle-income countries for at least 50 per cent of the time since 1987, when recordings of country classifications start (World Bank, 2013).

### 3.1.3 Types of interventions

Interventions must have adopted a preventive approach, implemented at either primary, secondary, or tertiary stages of prevention, as described in the Interventions section of the Background (above). There are a very wide range of activities that fall under the banner of preventive interventions; however, in general, preventive interventions focus on capacity building or social prevention to prevent or reduce gang membership or gang violence.

We took a broad approach to inclusion, based on the stated intent of the intervention to reduce or prevent gang membership or gang crime, and we excluded interventions that achieved this aim purely by the use of suppression strategies and tactics such as increased law enforcement or focused legislation. Interventions included in this review must have used a preventive approach and either explicitly aimed to (1) reduce participation in youth gangs, or (2) to reduce involvement in youth gang crime.

We exclude more broad-based interventions aimed at at-risk youth that did not explicitly target participation in youth gangs or involvement in youth gang crime. We recognize that such programs may target common risk factors of many negative social outcomes, including youth gang membership; however the focus of this review is on those programs that clearly aimed to reduce youth gang membership or crime.

### 3.1.4 Types of outcome measures

Studies included to address the objective of assessing the effects of preventive interventions to reduce youth gang membership (Objective 1) could measure a number of outcomes. These
included the change in youth gang participation and the change in the negative consequences of youth gang activities, including levels of crime and violence. We accepted for inclusion all outcomes related to individual or aggregate measures of participation in youth gangs and/or youth gang crime. Examples of eligible outcomes include, but are not limited to: individual measures of arrests, reoffending, or youth gang membership; self-reported, peer-reported or officially-reported crime; geographically aggregated measures of youth gang participation, youth gang arrests and/or youth gang violence; and perceptions of youth gang participation and/or youth gang violence.

*Other issues*

To address the objective of identifying reasons for implementation success or failure (Objective 2), we included a broader range of studies that assess the reasons for implementation success or failure of preventive gang interventions as outlined above. From these studies we included any research based findings relating to implementation. Examples of types of findings include those relating to political support, funding, training, the presence of international aid, community participation, education component, social support components, and the socio-political context of the implementation of the youth gang focused intervention.

### 3.1.5 Study designs

To address the two objectives of this review, we included two different, but potentially overlapping, sets of studies. Eligible study designs for the two objectives are listed in detail below.

*Study designs for Objective 1: Intervention effectiveness*

To be included in the synthesis of intervention effectiveness, studies had to use an experimental or quasi-experimental evaluation design with a valid comparison group as defined below. Eligible study types included the following experimental and quasi-experimental study designs:

1. randomized control trials
2. regression discontinuity designs
3. quasi-experimental, cross-sectional, cohort or panel designs that use multiple regression analysis and control for some combination of pre-intervention control variables listed below
4. matched control group designs (with or without baseline measurement)
5. unmatched control pre- and post-test designs, and
6. time-series designs (at least 25 pre- and 25 post-intervention observations).

Studies that use valid comparison (control) groups are those that use randomly assigned control groups, propensity score matched control groups, or statistically matched control groups. Appropriate matching variables include: baseline measures of crime, delinquency,
aggression or gang membership, or pre-intervention socio-demographic characteristics such as some combination of age, gender, ethnicity, socio-economic status, and education. We included designs that used non-matched control groups, if the study also took a pre-intervention baseline measure of the outcome, thereby allowing difference-in-difference analysis.

Because we anticipated a limited pool of relevant studies to be identified we were very inclusive in the breadth of eligible studies. The quasi-experimental designs we have included as eligible can be used to provide causal inference, albeit weaker inference than that which is provided by RCTs, as they provide a counterfactual by attempting to control for selection bias. This can be done in a number of different ways, such as: simulating randomization of the treatment and control groups (regression discontinuity), matching the characteristics of the treatment and control groups (matched control), statistically accounting for differences between the treatment and control groups (multiple regression analysis), or providing a difference-in-difference analysis (short interrupted time series, unmatched control with pre-test). We do recognize that including a wide range of quasi-experimental study designs may lead to an increased risk of bias introduced into the analysis. We therefore planned to conduct meta-analysis separately for randomized and non-randomized research designs, and conduct moderator analysis on study design to assess whether including these studies would have changed the estimate of effect size.

We aimed to include studies that measure the outcome at either the individual level or an aggregate level of geography such as the community; however, we planned to synthesize the results separately for different levels of analysis.

To be eligible for inclusion in a meta-analysis, the study had to report an effect size, or provided sufficient detail such that an effect size could be calculated.

**Eligible comparison conditions**

We aimed to include studies where the control group received no intervention, placement on a wait-list or “business as usual”. We also aimed to include studies that compared two treatments without reference to a no-intervention, wait-list or business as usual control group. We planned to conduct meta-analysis separately for studies that compared two active treatments.

*Study designs for Objective 2: Reasons for implementation success or failure*

To be included in the synthesis of factors influencing implementation success, studies were not required to use experimental or quasi-experimental designs; however, quantitative studies were not excluded from analysis for Objective 2. In order to capture the broadest range of evidence that assesses the reasons for implementation success or failure, we included (1) qualitative or quantitative studies and (2) process evaluations and other types of implementation evaluations. These studies may use qualitative rather than experimental or quasi-experimental designs; for example, key informant interviews or focus groups. These
studies did not need to be linked to the studies of intervention effectiveness, and formed an additional corpus of literature in which the authors identified mechanisms, activities, people or resources that influenced the success of the intervention implementation.

We only included studies that empirically assessed the intervention using either a quantitative or qualitative methodology, and reported on the sampling strategy, data collection, and the type of analysis. We did not review project documents unless attached to evaluations, and we excluded descriptive papers and opinion pieces where an analysis of primary data was not conducted.

At full text screening, we only accepted studies that were on topic and had reported, to some extent, on sampling strategy, data collection, and type of analysis. All studies that met these minimum criteria for eligibility, were then assessed for study quality using a modified CASP checklist. As discussed in more detail in section 3.3.3, a study was rated as low quality and excluded from the review if:

- the research design was not appropriate to answer the research question, OR
- the sampling strategy was not appropriate to the aims of the research, OR
- the analyses were not sufficiently rigorous.

In summary, a study must first report on design, sampling, and analyses to be eligible at full text screening, and in addition, to meet study quality thresholds for inclusion, a study must have used appropriate design and sampling, as well as sufficiently rigorous analyses.

### 3.1.6 Exclusion criteria

The social, political and economic frameworks that form the push and pull factors influencing youth gang formation are theorized to differ substantially between high income and low- and middle-income countries. We therefore excluded studies from high income countries, defined as countries that had not been categorized as low- or middle-income by the World Bank for at least 50 per cent of the time since 1987.
3.2 SEARCH METHODS FOR IDENTIFICATION OF STUDIES

3.2.1 Search strategy

This systematic review was conducted in August and September 2013, as part of a larger project focusing on conduct problems and youth crime in low- and middle-income countries (Murray et al., 2013) and alongside a systematic review on the predictors of youth gang violence in low- and middle-income countries (Higginson et al., 2014a). The search terms were broad enough to capture both the corpus of intervention studies and the corpus of predictive studies, with further refinement occurring at the abstract and title screening stage for each review.

The search strategy was developed using the Cochrane Collaboration’s Effective Practice and Organisation of Care Group search strategy for low- and middle-income countries, combined with selected MeSH/DeCS terms and free text terms relating to conduct problems, crime and violence. To maximise sensitivity, no methodological filters were used. The full search strategy is listed in Appendix A.

The search strategy included published and unpublished literature with no date constraints. We also did not place any language restrictions on the eligibility of documents; however our search of the literature was conducted in seven languages: English, French, Chinese, Arabic, Russian, Spanish and Portuguese. The geographic location of studies was limited to countries located in a LMIC, defined as low- or middle-income according to the World Bank at least 50 per cent of the time since 1987, when the recordings start. Table 1 shows the countries included in the review.

Table 1: Eligible countries

| Existing states | Afghanistan; Albania; Algeria; American Samoa; Angola; Antigua and Barbuda; Argentina; Armenia; Azerbaijan; Bangladesh; Barbados; Belarus; Belize; Benin; Bhutan; Bolivia; Bosnia and Herzegovina; Botswana; Brazil; Bulgaria; Burkina Faso; Burundi; Cambodia; Cameroon; Cape Verde; Central African Republic; Chad; Chile; China; Colombia; Comoros; Congo, Dem. Rep.; Congo, Rep.; Costa Rica; Côte d’Ivoire; Croatia; Cuba; Czech Republic; Djibouti; Dominica; Dominican Republic; Ecuador; Egypt, Arab Rep.; El Salvador; Equatorial Guinea; Eritrea; Estonia; Ethiopia; Fiji; Gabon; Gambia, The; Georgia; Ghana; Grenada; Guatemala; Guinea; Guinea-Bissau; Guyana; Haiti; Honduras; Hungary; India; Indonesia; Iran, Islamic Rep.; Iraq; Jamaica; Jordan; Kazakhstan; Kenya; Kiribati; Korea, Dem. Rep.; Kosovo; Kyrgyz Republic; Lao PDR; Latvia; Lebanon; Lesotho; Liberia; Libya; Lithuania; Macedonia, FYR; Madagascar; Malawi; Malaysia; Maldives; Mali; Malta; Marshall Islands; Mauritania; Mauritius; Mexico; Micronesia; Moldova; Mongolia; Montenegro; Morocco; Mozambique; Myanmar; Namibia; Nepal; Nicaragua; Niger; Nigeria; Oman; Pakistan; Palau; Panama; Papua New Guinea; Paraguay; Peru; Philippines; Poland; Puerto Rico; Romania; Russian Federation; Rwanda; Samoa; São Tomé and

3 http://data.worldbank.org/about/country-classifications/country-and-lending-groups
Principe; Saudi Arabia; Senegal; Serbia; Seychelles; Sierra Leone; Slovak Republic; Solomon Islands; Somalia; South Africa; South Sudan; Sri Lanka; St. Kitts and Nevis; St. Lucia; St. Vincent and the Grenadines; Sudan; Suriname; Swaziland; Syrian Arab Republic; Tajikistan; Tanzania; Thailand; Timor-Leste; Togo; Tonga; Trinidad and Tobago; Tunisia; Turkey; Turkmenistan; Tuvalu; Uganda; Ukraine; Uruguay; Uzbekistan; Vanuatu; Venezuela, RB; Vietnam; West Bank and Gaza; Yemen, Rep.; Zambia; Zimbabwe

Former states Czechoslovakia; Gibraltar; Mayotte; Serbia and Montenegro; USSR; Yugoslavia

### 3.2.2 Search locations

We searched a wide range of electronic academic databases, international organization databases, the websites of NGOs and other organizations. All locations were searched electronically. The search locations are listed in Table 2.

#### Table 2: Search locations used in the English language systematic search (hosting platforms in parentheses)

<table>
<thead>
<tr>
<th>Search Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>PsycINFO (Ovid) 1967 to 2013</td>
</tr>
<tr>
<td>Ovid MEDLINE(R) In-Process &amp; Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present</td>
</tr>
<tr>
<td>EMBASE (Ovid) 1974 to 2013 Week 35</td>
</tr>
<tr>
<td>CINAHL (EBSCOhost)</td>
</tr>
<tr>
<td>EconLit (EBSCOhost)</td>
</tr>
<tr>
<td>Criminal Justice Abstracts (EBSCOHost)</td>
</tr>
<tr>
<td>Russian Academy of Sciences Bibliographies (EBSCOHost)</td>
</tr>
<tr>
<td>Sociological Abstracts + Social Services Abstracts (ProQuest)</td>
</tr>
<tr>
<td>Applied Social Sciences Index and Abstracts (ProQuest)</td>
</tr>
<tr>
<td>International Bibliography of the Social Sciences (IBSS) (ProQuest)</td>
</tr>
<tr>
<td>ERIC (ProQuest)</td>
</tr>
<tr>
<td>Web of Science</td>
</tr>
<tr>
<td>LILACS (Note: included Spanish and Portuguese search terms)</td>
</tr>
<tr>
<td>SciELO (Note: included Spanish and Portuguese search terms)</td>
</tr>
<tr>
<td>National Criminal Justice Reference Service Abstracts Database</td>
</tr>
<tr>
<td>JOLIS (IMF, World Bank and International Finance Corporation)</td>
</tr>
<tr>
<td>World Bank</td>
</tr>
<tr>
<td>Open Grey</td>
</tr>
<tr>
<td>ProQuest dissertations</td>
</tr>
<tr>
<td>Pakistani Journal of Criminology</td>
</tr>
<tr>
<td>African Journal of Criminology and Justice Studies</td>
</tr>
<tr>
<td>Asian Journal of Criminology</td>
</tr>
<tr>
<td>Indian Journal of Criminology</td>
</tr>
<tr>
<td>South African Journal of Criminal Justice</td>
</tr>
<tr>
<td>South African Crime Quarterly</td>
</tr>
<tr>
<td>Turkish Journal of Criminology</td>
</tr>
<tr>
<td>Journal of Gang Research</td>
</tr>
<tr>
<td>NBER</td>
</tr>
<tr>
<td>IDEAS</td>
</tr>
<tr>
<td>International Juvenile Justice Observatory (IJJO) Documentation Center</td>
</tr>
<tr>
<td>United Nations Development Programme website</td>
</tr>
<tr>
<td>WHO Collaborating Centre for Violence Prevention website (<a href="http://www.preventviolence.info">www.preventviolence.info</a>)</td>
</tr>
<tr>
<td>Don M. Gottfredson Library of Criminal Justice Gray Literature Database</td>
</tr>
<tr>
<td>J-PAL Evaluations Database (<a href="http://www.povertyactionlab.org/evaluations">www.povertyactionlab.org/evaluations</a>)</td>
</tr>
</tbody>
</table>
Table 3 shows the locations searched in languages other than English. Due to the nature of database interfaces, the searches in these databases were less complex. The outcome search terms were used and, where possible, the search terms for child and youth age groups. Where possible we examined the full set of results from each search; however, in cases where the search produced an unmanageable number of results that could not be downloaded en masse, we screened the results online by page until the titles appeared irrelevant, based on the searcher’s subjective judgement.

**Table 3: Search locations used in the non-English language systematic search**

<table>
<thead>
<tr>
<th>Language</th>
<th>Search Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic</td>
<td>Index Medicus for the Eastern Mediterranean Region</td>
</tr>
<tr>
<td></td>
<td>King Saud University Repository</td>
</tr>
<tr>
<td></td>
<td>YU-DSpace Repository</td>
</tr>
<tr>
<td></td>
<td>Google Scholar</td>
</tr>
<tr>
<td>Chinese</td>
<td>China National Knowledge Infrastructure (CNKI)</td>
</tr>
<tr>
<td></td>
<td>Wanfang Data</td>
</tr>
<tr>
<td></td>
<td>Chongqing VIP Information Company (CQVIP)</td>
</tr>
<tr>
<td></td>
<td>Google Scholar</td>
</tr>
<tr>
<td>French</td>
<td>African Index Medicus (WHO)</td>
</tr>
<tr>
<td></td>
<td>Afrolib (WHO)</td>
</tr>
<tr>
<td></td>
<td>Global Health Library</td>
</tr>
<tr>
<td></td>
<td>Revue de Médecine tropicale</td>
</tr>
<tr>
<td></td>
<td>Refdoc</td>
</tr>
<tr>
<td></td>
<td>Google Scholar</td>
</tr>
<tr>
<td>Russian</td>
<td>Elibrary.ru</td>
</tr>
<tr>
<td></td>
<td>Google Scholar</td>
</tr>
<tr>
<td>Spanish and Portuguese</td>
<td>LILACS</td>
</tr>
<tr>
<td></td>
<td>SciELO</td>
</tr>
<tr>
<td></td>
<td>Google Scholar</td>
</tr>
</tbody>
</table>

The non-English language searches were conducted by a team of six researchers (four who spoke the search language as their first language, and two who spoke the search language fluently).

**3.2.3 Iterative approach to searching**

We conducted citation searches and citation harvesting from the references of included studies. We also examined the texts of all documents that had been marked as potentially useful for reference harvesting during the screening stages. We searched the internet for further information on, or evaluations of, any interventions identified in these documents, and found contact details for 50 organizations, which we emailed to request any quantitative
or qualitative evaluations of the interventions or of their implementation. We emailed our advisory group, prominent scholars in the field, and a range of NGOs and government agencies identified as having some likelihood of dealing with gang interventions to locate further studies that may not yet be published or located in our search. Any new literature of interest was obtained and assessed for eligibility.

3.3 DATA COLLECTION AND ANALYSIS

3.3.1 Selection of studies

Title and abstract screening

As the wider search strategy captured documents that examined a wide variety of youth behavior problems in low- and middle-income countries, the first step was to search within the results for terms specific to gangs, allowing the screening to focus on the documents where either the title or the abstract demonstrated that the document was potentially relevant to youth gangs. We exported the full search results from EndNote to Microsoft Access and searched for any occurrence of the gang-specific terms that appear in Table 4. The search string in Access was a standard Boolean OR string, written in SQL, where the presence of any of these terms in either the title or the abstract would result in a ‘hit’. This approach is the equivalent of having performed the original search with the addition of the following clause: (AND ((TI: gang OR gangs OR maras etc) OR(AB: gang OR gangs OR maras etc))). The group of studies that contained these terms was considered potentially eligible and was imported into SysReview, a Microsoft Access database designed for screening and coding of documents for systematic reviews.
A team of trained research assistants used a set of inclusion criteria to assess, on the basis of titles and abstracts, whether the studies returned from the systematic search were potentially eligible for inclusion in the systematic review. After training to ensure that each reviewer was adopting the same approach to screening, each document was screened by only one reviewer. The training included a comprehensive briefing by the review manager, including reading and discussion of the protocol, followed by each reviewer independently screening a set of 20 studies. The results of the initial screening of the training corpus were then mediated by the review manager, in consultation with the full review team. Further blocks of 20 studies were reviewed independently by each member of the review team, and mediated by the review manager. Once the review team reached an agreement rate of above 95 per cent, the subsequent screening of each document was conducted by only one reviewer. Any issues or questions that arose during coding were discussed amongst the review team and the review manager, and the review manager randomly checked screening decisions to ensure consistency. Where a document was written in a language other than English, it was screened by a native speaker of that language where possible. If this was not possible, the document was translated using Google document translation and screened in English.

The title and abstract screening inclusion criteria were:

1. all participants are 10-29 years old
2. the study is located in a LMIC, defined according to the World Bank as low- or middle-income at least 50 per cent of the time since 1987, when the recordings start
3. the document reports on youth gangs

Documents were excluded if the answer to any one of the criteria was unambiguously “No”, and were classified as potentially eligible otherwise. We erred on the side of inclusivity and only excluded studies where it was clear that these criteria were not met.

**Full text eligibility screening**

The full text document was located for all studies screened as potentially eligible at the title and abstract stage, and attached to SysReview. If dissertations were located that were potentially eligible for inclusion we contacted the author or their institution for a copy of the document. In order to narrow down the results of the initial search to the subset of studies

---

**Table 4: Gang-specific search terms for first step of title and abstract screening**

<table>
<thead>
<tr>
<th>Gang-specific search terms</th>
<th>“Street children”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gang</td>
<td>“Street children”</td>
</tr>
<tr>
<td>Gangs</td>
<td>“street-children”</td>
</tr>
<tr>
<td>Maras</td>
<td>“Urban youth”</td>
</tr>
<tr>
<td>Pandilla*</td>
<td>“Street connected”</td>
</tr>
<tr>
<td>“Youth violence”</td>
<td>“Street-connected”</td>
</tr>
<tr>
<td>“Troublesome youth group”</td>
<td>“At risk”</td>
</tr>
<tr>
<td>“Deviant youth group”</td>
<td>“At-risk”</td>
</tr>
</tbody>
</table>

---
that specifically focused on preventive interventions in youth gangs, different criteria were included at the full text eligibility screening stage.

The team of research assistants were trained on full text eligibility screening and each screened a corpus of 20 eligible studies independently. All screening conducted during training was double checked by the review manager to ensure accuracy and consistency of information capture. Screening discrepancies at the training stage were resolved by discussion between reviewers, in consultation with the review manager if required.

Once training was completed, each document was screened by one research assistant. However, given the very small number of studies initially screened as eligible, any studies that were excluded at this stage were then screened a second time by a different researcher, and any differences in screening decisions were mediated by the review manager.

Where a document was written in a language other than English, it was screened by a native speaker of that language where possible. If this was not possible, the document was translated using Google document translation and screened in English.

The full text eligibility screening criteria were:

1. the document reports on youth gangs
2. all participants are 10-29 years old
3. the study is located in a LMIC, defined according to the World Bank as low- or middle-income at least 50 per cent of the time since 1987, when the recordings start
4. the study assesses a preventive intervention
5. the study uses an eligible quantitative study design (including a comparison group)
6. the study evaluates reasons for the success or failure of the intervention
7. the study reports on the sampling strategy
8. the study reports on data collection
9. the study reports on the type of analysis

### 3.3.2 Eligibility of studies for Objective 1 and Objective 2

Documents to address Objective 1 and Objective 2 were drawn from the same search and screening strategy. The flow of studies for each objective was governed by the responses to the full text eligibility screening criteria listed above, and documents were allowed to be included in both the meta-analytic synthesis for Objective 1 and the thematic synthesis for Objective 2.

Documents were eligible for detailed coding and inclusion in the meta-analysis if they were coded as ‘Yes’ in each of criteria 1, 2, 3, 4 and 5 (above).

Documents were eligible for inclusion in a thematic synthesis of the reasons for implementation success or failure if they were coded as ‘Yes’ in each of criteria 1, 2, 3, 4, 6, 7, 8, and 9.
3.3.3 Assessment of methodological quality

There were no studies identified as eligible for analysis for Objective 1, therefore no assessment of methodological quality was conducted for Objective 1.

For the studies included in the analysis for Objective 2, we used a modified version of the Critical Appraisal Skills Programme (CASP) Qualitative Research Checklist 31.05.13, adapted to deal with descriptive quantitative studies and process evaluations (see Appendix D for details). The methodological quality of each study was assessed by one reviewer, and all studies were double checked by the review manager, who was not blind to the assessment. Coding discrepancies were resolved by discussion between reviewers, in consultation with the review manager.

We did not include studies where the quality was rated as low. Studies were not excluded based on a full CASP appraisal, but were excluded based on the ratings on three key items of the CASP checklist. For the purposes of this review, a study was rated as low quality if the answer to all of the following items was ‘No’ or ‘Can’t tell’:

- Is the research design appropriate to answer the research question?
- Was the sampling strategy appropriate to the aims of the research?
- Were the analyses sufficiently rigorous?

Although positive answers to these three questions do not by any means guarantee a high quality study, this operationalization of low quality provides a minimum threshold of reporting and analysis for inclusion. In practice, no studies were excluded for a low quality assessment.

3.3.4 Data extraction for meta-analysis

The search and screening process did not locate any studies that were eligible for inclusion in the review of effectiveness of preventive gang interventions in low- and middle-income countries. No studies were therefore eligible for meta-analysis. Details of our planned methods of data extraction, assessment of methodological quality, and methods of synthesis for Objective 1 can be found in the published protocol (Higginson et al., 2014b). The remainder of Section 3 discusses the methods used in the qualitative thematic synthesis of the reasons for the success or failure of intervention implementation.

3.3.5 Data extraction for thematic synthesis

Two review team members with expertise in the analysis of qualitative data conducted the coding and synthesis of study findings by hand. The eligible studies were initially

4 This operationalisation of a low quality study was suggested by Editor of the Campbell Crime and Justice coordinating group, David Wilson (personal conversation, 2013).
categorized according to the type of intervention that was reported. One reviewer read the full text of each eligible study and recorded all barriers or facilitators of implementation that were identified by the study authors. In an iterative process, the extracted data was then tabulated and each study re-examined in light of the collated list to ensure full data capture. English-language studies were coded by a native English speaker and the Spanish-language study was coded by a Brazilian-born researcher fluent in Spanish. The iterative process of data extraction and synthesis was conducted by both reviewers working together.

3.4 METHOD OF SYNTHESIS FOR OBJECTIVE 2: REASONS FOR IMPLEMENTATION SUCCESS OR FAILURE

To address the second objective of the review and assess the reasons for the implementation success or failure of preventive youth gang interventions, we conducted a thematic synthesis of evidence on the reasons for success or failure of the implementation of preventive youth gang interventions. In this review we aimed to identify mechanisms, activities, people and resources that mediate between the intervention inputs and outcomes. The synthesis specifically focuses on practical, policy-focused implications from the literature.

The data on facilitators and barriers extracted from the studies were mapped onto key themes. Each study was classified by intervention type and the frequency of each key theme was tabulated across intervention types. The identified factors were examined both within intervention groups and across intervention groups to examine questions of generalizability.

The synthesis was organised in two parts. The first part was a descriptive analysis. This included a summary of study characteristics, textual descriptions of the studies, and the authors’ conclusions about barriers and facilitators of implementation success. The second part of the review contained a thematic summary. The results were summarized according to key identified themes, and this section contains an analysis of any barriers and facilitators of intervention success that cut across the various interventions, and the extent to which the identified factors were able to be generalized.

3.5 DIFFERENCES BETWEEN PROTOCOL AND REVIEW

In our published protocol (Higginson et al., 2014b) we stated that the thematic synthesis would lead to the development of logic models for interventions with sufficient data to enable the construction of a robust model; unfortunately, there were only four studies identified and they did not assess the same intervention type, so we were unable to develop any logic models. We had also planned to use Leximancer 4 and NVivo 10 text analytic software (Leximancer Pty Ltd, 2012; QSR International, 2012) to identify and code the key themes in the included studies; however, due to the small number of eligible studies located, this coding was instead conducted by hand.
4 Results of the search

The systematic search of English language databases yielded a total of 44,312 records, and the Spanish and Portuguese language search of the Scielo and Lilacs databases provided a further 10,192 sources. The initial search was designed to provide source documents for several related systematic reviews, and as anticipated, the search yielded significantly more hits than were directly relevant to this review. In order to refine the results, we excluded any document that did not contain one of the gang terms listed in Table 4 (Section 3.3). This process resulted in the exclusion of 41,928 records, with 2610 remaining to be screened.

The searches in French, Russian, Arabic and Chinese did not generally allow easy export of results. Some databases allowed an export to Excel, whilst in others no direct export was possible and the search and screening processes were conducted simultaneously, in the manner of a grey literature search. The titles and/or abstracts of documents identified as potentially eligible were screened by a native speaker of the relevant language. None of the records located in the French, Russian, Arabic or Chinese searches were deemed potentially eligible at the title and abstract screening stage. Finally, the English language grey literature search and reference harvesting yielded a total of 291 potentially eligible documents, bringing the pool of potentially eligible records to be screened for title and abstract eligibility to 2901.

During title and abstract screening, 2134 studies were excluded from further consideration on the basis of relevance or duplicate status, and a further 52 documents could not be located for screening, leaving 714 documents to be screened for full-text eligibility. There were 5 substantive eligibility criteria common to document selection for Objective 1 and Objective 2. After full-text screening on those 5 criteria, 684 studies were excluded on the basis of substantive relevance or duplicate status. Documents were screened for each eligibility criteria in order, and once the first exclusion occurred, no further screening of that document was done. There were 42 duplicate documents identified in total. After full-text eligibility screening, 117 documents were excluded because they were not conducted in a low- or middle-income country. Of the remaining documents, 187 were excluded as they did not report on youth gangs. A further 320 were excluded as they did not report on a preventive intervention, and 18 were excluded as the participants did not meet the age criterion.
Figure 3: Flowchart of search and screening process

Total documents identified in English language database search (n=44,312)

Non-English language search (French, Chinese, Russian, Arabic) screened for eligibility separately (n=0 eligible)

Spanish/Portuguese language database search (n=10,192)

Documents excluded as neither title nor abstract contained ‘gang’ terms (n=41,928)

English language grey literature search & reference harvesting (n=291)

Potentially eligible studies screened for title and abstract eligibility (n=2901)

Document excluded on title & abstract (n=2135) (multiple criteria possible):
- Duplicate document (n=99);
- Book review (n=12);
- Not located in LMIC (n=534);
- Did not report on youth gangs (n=1507);
- Participants not aged 10-29 years (n=7);

Documents eligible for Objective 2 (n=4)

Full-text of document could not be located (n=52)

Documents excluded at full-text screening (n=684) (Common criteria for Objectives 1 & 2, first exclusion listed):
- Duplicate document (n=42);
- Not located in LMIC (n=117);
- Does not report on youth gangs (n=187);
- Does not assess a preventive intervention (n=320);
- Participants not aged 10-29 years (n=18)

Documents excluded for Objective 1
- Ineligible study design (n=30)

Documents excluded for Objective 1
- Excluded on method reporting (n=11) (multiple criteria possible)
  - Did not report on sampling strategy (n=9)
  - Did not report on data collection (n=9)
  - Did not report on type of analysis (n=8)

Documents eligible for Objective 2 (n=4)

Documents identified in English language database search (n=44,312)

Documents excluded as n either title nor abstract contained ‘gang’ terms (n=41,928)

Spanish/Portuguese language database search (n=10,192)

Documents excluded as neither title nor abstract contained ‘gang’ terms (n=41,928)

English language grey literature search & reference harvesting (n=291)

Potentially eligible studies screened for title and abstract eligibility (n=2901)

Document excluded on title & abstract (n=2135) (multiple criteria possible):
- Duplicate document (n=99);
- Book review (n=12);
- Not located in LMIC (n=534);
- Did not report on youth gangs (n=1507);
- Participants not aged 10-29 years (n=7);

Documents excluded at full-text screening (n=684) (Common criteria for Objectives 1 & 2, first exclusion listed):
- Duplicate document (n=42);
- Not located in LMIC (n=117);
- Does not report on youth gangs (n=187);
- Does not assess a preventive intervention (n=320);
- Participants not aged 10-29 years (n=18)

Documents excluded for Objective 1
- Ineligible study design (n=30)

Documents excluded for Objective 1
- Excluded on method reporting (n=11) (multiple criteria possible)
  - Did not report on sampling strategy (n=9)
  - Did not report on data collection (n=9)
  - Did not report on type of analysis (n=8)

Documents eligible for Objective 2 (n=4)
At this point the responses to the remaining methodological screening criteria funneled the documents into those relevant for the meta-analytic synthesis of Objective 1 and those relevant for the thematic synthesis of Objective 2, with the possibility remaining that a document may be eligible for both syntheses. None of the remaining 30 documents used an eligible study design for the meta-analytic review of effectiveness (Objective 1). Of those 30 studies, 15 did not evaluate the reasons for the implementation success or failure, and were therefore also not eligible for the thematic synthesis (Objective 2). Of the remaining 15 documents, a further 11 were excluded as they did not provide sufficient detail on the methodology. This left 4 studies that were eligible for inclusion in the thematic synthesis (Objective 2).

4.1 EXCLUDED STUDIES

The most frequent reasons for exclusion at the full text screening stage were that a study was not conducted in a low- or middle-income country (n=117), that the document did not report on youth gangs (n=187) and that the document did not assess a preventive youth gang intervention (n=320). Of those documents that do assess preventive gang interventions, the vast majority did not meet minimum methodological standards for eligibility for either objective (n=26).

Several of the initial searches were conducted on databases that did not allow a search on abstracts or titles, therefore the full text document was the subject of the initial search. Subsequently, any references within the document to eligible geographies would have captured the document, and the geographic constraint of the actual study was often unclear until the full text screening stage. Many of the studies that were excluded on the basis of geography were those that reported on gangs in ethnic or immigrant populations in the USA. Similarly, many of the gang studies conducted in the USA discuss the relationship between Latin American gangs and gangs in the USA, or the impact of gangs worldwide, and the study’s focus on a US population was not clear during title and abstract screening. An example of a study excluded on this criterion is Grant and Feimer’s (2007) study Street gangs in Indian country: A class of cultures, which focuses on gangs in Native American reservations in the USA, and not on gangs in India.

A large number of the studies that were conducted in low- and middle-income countries were not focused on the group based phenomenon of youth gangs. The ‘gang terms’ that were used to narrow the results of the initial search were broad enough to retain documents that reported on wider youth phenomena, such as youth violence, at-risk youth more broadly, and street children. Whilst these terms are often used to describe gangs, they do not do so exclusively. Many studies examined youth violence, for example, without reference to this violence occurring in gangs. A large number of studies were excluded because they focused on street children and social marginalization, but did not situate street children as gang members or affiliates. Similarly, the term ‘at-risk’ is extremely broad, and whilst it may
capture youth at risk of gang affiliation, it was more often used to describe young people at risk of homelessness, abuse or deprivation. An example of a study excluded on this criterion is Bernat (1999), which examines the criminalization of street children and the state violence committed against street children in Haiti, yet did not position the street children as gang involved.

Although there was a large number of documents that reported on the phenomenon of youth gangs in low- and middle-income countries (n=368), the most common reason for exclusion was that the study did not assess a preventive gang intervention (n=320). This represents 87 per cent of the identified unique documents relating to youth gangs in low- and middle-income countries being excluded on this criterion. Many studies described or discussed youth gangs without reference to interventions, or focused on suppressive interventions that had no preventive component. An example of a study excluded on this criterion is Adebiyi et al., (2011), which examines Nigerian secondary school students’ perceptions of safety in the community and at school, and reports on the prevalence of youth gangs in the community as a safety issue for students, but does not discuss interventions. A second example is the study by Biswas et al. (2011), which assessed the factors associated with risky sexual behaviours in gang-involved youth in El Salvador and the USA. Whilst focusing on youth gang members in a low- or middle-income country, the only reference to interventions is the authors’ suggestions that their findings “accentuate the need for culturally relevant systemic interventions that are tailored towards at-risk gang-involved youth” (p.312). A final example is a paper by Cruz (2010), which examines the evolution of Central American maras and the impact of hard-line suppressive interventions, and does not report on preventive interventions.

Finally, of the 30 documents that did meet all the substantive criteria of reporting on a preventive intervention targeting youth gangs with the majority of members aged 10 to 29 in low- and middle-income countries, none used an appropriate study design to report on effectiveness (Objective 1). The majority of these documents reported descriptions of interventions and an assessment of the interventions’ success, in the opinion of the author or key informants; however these documents did not report any form of qualitative or quantitative analyses. Other documents discussed “best practice”, again without reference to evaluation analyses. Another subset of documents reported a change in youth gang membership or crime after an intervention, but did not use a comparison group to control for other factors that may have influenced the results.

Of the 15 documents that evaluated reasons for implementation success or failure, only 4 met the minimum methodological standard required to be included in the thematic review for Objective 2. The minimum methodological standard for Objective 2 was that the study must report on sampling strategy, data collection, and analysis. Eleven studies were excluded from Objective 2 on one or more methodological grounds: nine did not report their sampling strategy, nine did not report on their approach to data collection, and eight did not report on their method of analysis.
An example of a study that examines a preventive intervention in great depth is Jones’ (1997) article which outlines the approach taken by the Mexican program JUCONI (Junto con los Niños), and discusses the implications for best practice. This document provides detailed information on the workings of the program and asserts its success in terms of the proportion of children leaving the street following contact; however this data on effectiveness is not compared to a control group, and therefore it is not possible to determine if this proportion is more or less than would be seen in the absence of the intervention. As a result, the study cannot be included in the meta-analytic synthesis of effectiveness (Objective 1). Whilst the paper does report on reasons for implementation success or failure, it does not report on the sampling strategy, data collection, or type of analysis and is therefore ineligible for inclusion in the thematic synthesis (Objective 2).

The list of excluded studies and reasons for exclusion can be found in Section 9.2.
5 Results: Synthesis of intervention effectiveness

As no eligible studies were located, no synthesis of intervention effectiveness was conducted.
6 Results: Review of reasons for implementation success or failure

6.1 DESCRIPTION OF STUDIES

Four studies were identified as eligible for inclusion in the thematic synthesis of barriers and facilitators of intervention implementation. A summary of these four studies follows and a brief overview is provided in Table 5 (below). The individual studies are described in more detail in Appendix E.

6.1.1 Population

All four studies were conducted in Latin America and the Caribbean. Brenneman (2009) conducted field observations and interviews with 63 former gang members in Guatemala, Honduras, and El Salvador. McLean & Lobban (2009) conducted research in three Jamaican communities, a household survey of 940 respondents, as well as interviews and focus groups with key informants. Pastrán and Lanzas (2006) conducted focus groups of 24 participants from six barrios in Nicaragua, as well as semi-structured interviews with project stakeholders and a document review of project files. Strocka (2009) conducted participant observation, a pre-post questionnaire, and follow-up observation of 24 participants from rival manchas in Peru.

6.1.2 Intervention

The four interventions were highly diverse. Three interventions were tertiary, aimed at assisting gang exit or reducing gang conflict (Brenneman, 2009; McLean & Lobban, 2009; Strocka, 2009). Brenneman (2009) examined evangelical religious conversion as a method of assisting gang exit. McLean and Lobban (2009) conducted an evaluation of the Peace Management Initiative, a program that targets gangs and youth involved in violence through a combination of mediation, counselling and therapy, and provides social development programs aimed at bringing together neighbouring communities. Strocka (2009) conducted a quasi-field experiment evaluating a camping expedition that used social activities, cooperative activities such as cooking, games, music, drama and sport to bring together rival manchas under non-violent conditions to reduce conflict. One intervention (Pastrán & Lanzas, 2006) was a secondary intervention aimed at at-risk youth. The project organized
at-risk adolescents into clubs where they received training and created action plans to improve their communities.

6.1.3 Study design

Two studies used a purely qualitative study design. Brenneman (2009) used a qualitative methodology, coding interviews and observations for common themes. The sample was selected using snowball sampling. Pastrán and Lanzas (2006) used a qualitative participatory methodology called Systematization of Experiences Approach to distill the main themes of the intervention. The other two studies used a mixed methods study design. McLean and Lobban (2009) used a mixed methods evaluative approach, with qualitative findings guiding the analysis, supported by cross-sectional quantitative survey data, and police and hospital data. Strocka (2009) conducted a pre-post questionnaire of the intervention participants, as well as qualitative participant observation during the camp, along with follow-up observations and conversations with participants.
<table>
<thead>
<tr>
<th>Study</th>
<th>Study objectives</th>
<th>Country</th>
<th>Intervention</th>
<th>Methods of data collection</th>
<th>Methods of analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brenneman, 2009</td>
<td>Evaluates the impact of evangelical conversion on gang exit. The study sought to understand “what makes a gang homie trade in his gun for a Bible?” (p.11)</td>
<td>Guatemala, Honduras, El Salvador</td>
<td>Tertiary intervention. Evangelical religious conversion to assist gang exit.</td>
<td>Interviews &amp; field observations. In-depth, semi-structured interviews with 63 former gang members (59 men, 4 women), &amp; experts &amp; practitioners at 27 organisations &amp; ministries. Field observations of prisons &amp; ‘red zone’ neighbourhoods, &amp; evangelical conversion campaign targeting gang members.</td>
<td>Open-ended coding to allow for unexpected themes &amp; patterns to emerge. Transcripts were “coded on several dimensions .... coded paragraph-by-paragraph and, in some cases, line-by-line for broad themes such as religion, family, and violence as well as more specific sub-themes such as “conversion” and “domestic violence”” (p.11-12).</td>
</tr>
<tr>
<td>McLean &amp; Lobban, 2009</td>
<td>Independent evaluation of government programmes aimed at increasing community safety &amp; security, including the Peace Management Initiative (PMI).</td>
<td>Jamaica</td>
<td>Tertiary intervention. Targets gangs &amp; youth involved in violence, through a combination of mediation, counselling &amp; therapy, &amp; social development. Incorporates structured activities aimed at bridging neighbouring communities &amp; bringing them together.</td>
<td>Police crime statistics, hospital data of violence related injuries. Field research in 3 PMI communities, household survey of 940 respondents. Interviews with key informant at national &amp; local level from government, international stakeholders, program staff, local partners. Focus groups with community leaders, young men, beneficiaries of program services, women &amp; children.</td>
<td>The authors report that analysis “was guided by the qualitative findings of the research. Qualitative data were then reinforced by the quantitative findings of the household survey. In order to attempt to identify the outcomes of programmes, the survey findings have been triangulated with police &amp; hospital data. The emphasis was on identifying “success factors, challenges &amp; lessons learnt”: (p.21)</td>
</tr>
<tr>
<td>Pastrán &amp; Lanzas, 2006</td>
<td>Evaluates the project Protagonismo de las y los adolescentes en la disminución de la violencia juvenil en diez barrios del Distrito VI del Municipio de Managua (Youth leadership in hindering youth violence in ten suburbs of the Sixth District of the Municipality of Managua)</td>
<td>Nicaragua</td>
<td>Secondary intervention. Targeted at-risk youth as leaders &amp; participants of youth clubs. 150 adolescents were selected &amp; organised into 10 clubs, one for each of target barrios. Clubs elected leaders &amp; received training to elaborate a local agenda &amp; action plan to improve their communities, focusing on issues such as: reproductive health,</td>
<td>Two focus groups of 12 participants. 18 female, 6 males from six of the study barrios. Semi-structured interviews with 6 project stakeholders. Document review of project files.</td>
<td>Participatory methodology (Systematization of Experiences approach).</td>
</tr>
</tbody>
</table>

Table 5: Summary of key characteristics of included studies
| Strocka, 2009 | Study aimed to evaluate the contact hypothesis, and “test whether enmity and violent conflict between manchas could be reduced by bringing them into contact with each other under non-violent and noncompetitive conditions” (p.108) | Peru | Tertiary intervention. Quasi-field experiment evaluating a camping expedition with members from two rival manchas. The intervention “aimed to change the behaviour & attitudes of participants and to reduce intergang conflict” (p.105). The camping expedition took place over four days in a bush camp setting outside the city, involving social activities, cooperative activities such as cooking, games, music, drama & sport. | Pre-post questionnaire & participant observation to record individual & intergroup interactions. Evaluation meeting with participants on the final day. Follow-up via observation & conversations during the following 3 months. Participants were 25 male mancha members from 4 different manchas. | Analysis of survey results using one way repeated measures ANOVA. Qualitative data analysis technique not specified. |
6.2 METHODOLOGICAL QUALITY OF INCLUDED STUDIES

6.2.1 Assessment of methodological quality

Each of the 4 included studies were assessed for methodological quality using the amended Critical Appraisal Skills Programme (CASP) Qualitative Research Checklist tool, shown in Appendix D. The results of this assessment are shown in Table 6.

Each study reported clearly (if at times briefly) on its methods, and used appropriate qualitative methods to answer its proposed research questions, although Brenneman (2009) was not completely clear in its presentation of analyses. Overall, any deficit in study quality would come about due to the general lack of reporting of relationships between researchers and participants, conflict of interest, and ethical considerations. None of the studies comprehensively reported on these aspects of the research; however, this deficit is more pronounced in McLean and Lobban (2009), Pastrán and Lanzas (2006), and Strocka (2009).

As discussed in Section 3, studies were not excluded based on a full CASP appraisal, but were excluded based on the ratings on three key items of the CASP checklist. Our threshold for low study quality was that any of the answers to the three highlighted questions (4, 6, & 13) were No or Can’t Tell (C/T). None of the included studies were assessed as having low study quality. It is important to note that this does not imply that the studies were high quality analyses of the barriers or facilitators of implementation of youth gang preventive interventions. Rather, each study reported clearly on its own aims and analyses. We have extracted information that is relevant to the aims of this systematic review, but the extracted information may have been somewhat tangential to the study’s central research question.
Table 6: Results of CASP assessment for studies included in the synthesis of reasons for success or failure of intervention implementation

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>2</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>3</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>4</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>5</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>6</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>7</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>8</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>9</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>10</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>11</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>12</td>
<td>N</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>13</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>14</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
</tr>
<tr>
<td>15</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>16</td>
<td>Y</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>17</td>
<td>Y</td>
<td>C/T</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>18</td>
<td>N</td>
<td>N</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>19</td>
<td>N</td>
<td>C/T</td>
<td>C/T</td>
<td>C/T</td>
</tr>
</tbody>
</table>
6.3 SYNTHESIS OF RESULTS

This synthesis is based on the findings from the data and analysis of the four eligible studies that identified at least one factor that may help or hinder the implementation of programs aimed at preventing youth gang violence and youth gang membership in low- and middle-income countries. Because the studies report on different interventions, we will present a brief summary of the findings from each study, before highlighting five key cross-cutting issues.

6.3.1 Promoting gang exit: The Evangelical church. (Brenneman (II), R. E., 2009)

Brenneman (2009) sought to understand “What makes a gang homie trade in his gun for a Bible?” (Brenneman, 2009: 11). He conducted in-depth semi-structured interviews with 63 former gang members (59 men, 4 women) in the “Northern Triangle” of Central America where youth gang violence is pervasive — Guatemala, El Salvador and Honduras. He notes that the “extended interviews provided first-hand retrospective accounts of joining, participating in, and eventually leaving the gang from the perspective of the ex-member himself or herself” (Brenneman, 2009: 300). Brenneman also interviewed experts and practitioners at 27 organisations and ministries. He undertook field observations of prisons and ‘red zone’ neighbourhoods, and an evangelical conversion campaign targeting gang members.

Desistence goes beyond the initial religious conversion and gang exit: It is a lifelong process. Understanding this commitment is important to successful implementation.

The role of the Evangelical Church in facilitating gang exit is tied to preventing recidivism in former gang members. Brenneman (2009) cites former gang members as reporting three basic obstacles to leaving a gang, which are central to the implementation of a gang-exit strategy through evangelical conversion. Apart from the ‘morgue rule’ whereby gang members fear they or their families will be killed for leaving, the likelihood of finding legitimate employment is low. Most gang members have limited formal education. In addition, they are feared by the general public and locked out of even the most basic jobs. The third reason cited by ex-gang members was “the addictions associated with la vida loca (the crazy life)” (Brenneman, 2009: 19). Citing his interviews, Brenneman (2009) suggests that this makes starting over difficult since “drug abuse, relational conflicts, and an inability to manage anger not only made finding a job even harder but put them at risk of further incarceration or elimination by the gang” (Brenneman, 2009: 18-19). Further, he found that while gang members may ‘leave’, to join the Church, they continue to be monitored by the gang for life. If they lapse in their dedication to the Church, they become the target of the gang once again and face the ‘morgue rule’. Brenneman’s research suggests, therefore, that the Church provides a viable ongoing alternative to gang involvement by enforcing sobriety and piety, assisting with reintegration into society and employment, and importantly, providing a ‘free pass’ around the ‘morgue rule’ for former gang members. Although “some
ex-gang members reported avoiding the ‘morgue rule’ by other means than evangelical conversion, no exception was as widely referenced as the evangelical escape” (Brenneman, 2009: 16).

Implementation of a gang-exit strategy requires an awareness of the competing attractors of gang membership

Based on the in-depth interviews conducted with ex-gang members, Brenneman argues that the Evangelical Church does not play as significant a role in preventing youth joining gangs in the first place because the attractiveness of gang membership for youth is related to structural conditions which produce feelings of shame. Brenneman (2009) found that in the absence of a change to the underlying structural factors that make gang membership attractive to youth, “religious institutions will be hard-pressed to provide long-term solutions that keep children from viewing the gang as an attractive alternative in the first place” (Brenneman, 2009: 25). In analyzing the interview materials, he employs the “theoretical tools of symbolic interactionism and the sociology of emotions to more carefully specify what it is about the experience of poverty or abuse that ‘pushes’ youth toward the gang and what it is about the gang that ‘pulls’ them toward becoming a homie” (Brenneman, 2009: 17). “Drawing heavily from testimonies of ex-gang members, I argue that joining the gang is not a one-time, momentary decision but an interactive process” (Brenneman, 2009: 17). From his interviews with former gang members, Brenneman (2009) found that “disenfranchised youth are drawn to the gang because it offers the opportunity to avoid acknowledging feelings of shame, ‘bypassing’ shame through the experience of violence, ‘adult’ pastimes such as sex and drug abuse, and solidarity from feeling part of a group” (Brenneman, 2009: 18). A gang’s access to money and weapons also makes recruiting and keeping youth easy. An awareness of pull factors is important to the implementation of gang-exit strategies.

A cornerstone of recruitment of gang members to the Church is the use of converted former gang members

Based on interviews with stakeholders and ex-gang members, Brenneman argues that the use of former gang members to recruit new members is a cornerstone of the Pentecotal Church’s approach. For example, one of Brenneman’s interviewees ministers from his home through his program “Freed by Christ” and actively encourages gang members to leave the gang and join the Church (Brenneman, 2009: 10).


The PMI intervention follows a two-step approach: first the intervention focuses on violence reduction, followed by livelihood opportunities to address poverty. PMI’s mandate is to mitigate and defuse community violence. PMI is involved in three main areas of activity: mediation (for example, brokering peace treaties); counselling (for example, therapeutic and psychological assistance); and social development (for example, small scale livelihood grants
to ex-combatants). The PMI intervention was evaluated as part of a larger Government of Jamaica commissioned study of 10 community security and transformation programs to establish which methodologies and approaches are influencing progress towards greater community security and transformation. Of the 10 programs evaluated, only PMI sought directly to prevent youth gang violence and as such it in the only intervention evaluation included here.

In order to evaluate PMI, the research team undertook field research in three PMI communities, conducted a household survey of 940 respondents and analysed police crime statistics and hospital data of violence related injuries in the PMI areas. They also conducted interviews with key informants at national and local level from government, international stakeholders, program staff, local partners and focus groups with community leaders, young men, beneficiaries of program services, women and children.

**PMI’s perceived success is related to its targeting of community priorities through a bottom-up approach**

McLean and Lobban (2009) found that one of the critical factors of PMI is that it adopted a bottom-up approach to target community priorities (McLean & Lobban, 2009: 55-56). For example, in the community survey, dispute resolution was an identified community priority with 76 per cent of respondents saying that improving dispute resolution would have a big impact on crime and violence in their community. This community priority aligns with the PMI program aims, where “dispute resolution is at the heart of PMI’s peace brokering work” (McLean & Lobban, 2009: 60). Not surprisingly, public satisfaction with the program was a high 85 per cent (McLean & Lobban, 2009: 72), and the vast majority of respondents felt that PMI had made a significant impact to their safety (McLean & Lobban, 2009: 80). PMI’s high profile ‘wins’, such as the August Town peace treaty, have made the public aware of its activities and role and added to public perceptions of its efficacy in reducing gang violence.

**There is a need for a joined up approach and an overarching strategy so program boundaries are clear and interventions can focus on what they do best**

The evaluation team found that the lack of an inter-program strategy has impacted PMI in a specific way, because PMI has no clear downstream and upstream boundaries of the role it plays. The “assessment team repeatedly heard from different stakeholders that the organisation is over-stretched” (McLean & Lobban, 2009: 45). In identifying gaps in program design, McLean & Lobban (2009) argue that, “Because it has established a unique niche, it is in high demand from the Government to ‘go broader’ and intervene in emerging conflicts in a wide range of communities. Because of the relationships with warring factions it develops in communities it comes under pressure locally to ‘go deeper’, remain engaged and provide development interventions to sustain the peace. The lack of clarity in its relationships with other programs compounds its challenge as it is unclear who and when it can ‘handover’ interventions to” (McLean & Lobban, 2009: 47). Based on interviews with key stakeholders and program staff, the evaluation team likened the challenge of PMI defining
its role to “that of a runner who ends up having to run all the legs of a relay” (McLean & Lobban, 2009: 47).

A key to peacebuilding and reducing gang violence involves engaging with the gangs themselves and making them part of the solution

McLean and Lobban (2009) report that a number of interviewees nationally and locally were uneasy about “the ethical basis for ‘giving resources to gunmen’ and the police are at times nervous about PMI’s relationships with ‘shottas’” (McLean & Lobban, 2009: 47). As such, another gap in program design identified by McLean and Lobban (2009) is the extent to which stakeholders may not be supportive of PMI’s relationship with the gang members or shottas because stakeholders do not understand the fundamental role of combatants in the peacemaking process. The PMI develops relationships with and engages the Don’s and gangs to broker peace. As a result, PMI actively avoids direct contact with police, playing a neutral role with staff avoiding outwardly working with the police lest they be seen to be informers: “working with them, but not getting too close” (McLean & Lobban, 2009: 68). This strategy allows PMI to access the gangs and build relationships with them over time, whilst allowing the gang members to play a role in brokering the peace themselves, without fear of reprisals from law enforcement.

The need to have a grassroots understanding of the complex and often ambivalent relationship between the local community and the gangs is highlighted in the evaluation. For example, McLean and Lobban (2009: 87) note that “of the 26% of [survey] respondents who said that there was a Don in their community, 66% said that this Don does “good or positive things””. PMI aims to reduce the influence of gangs in politics and governance. For example, the researchers found that in August Town and Mountain View, the local governance structures have emerged out of PeaceCouncils that were formed with the support of PMI to bring the warring sections of the communities together, and “over time, the membership of the Council in Mountain View has transitioned from gang leaders to more legitimate community leaders” (McLean & Lobban, 2009: 66).

6.3.3 Youth leadership in hindering youth violence: Managua, Nicaragua. (Pastrán, I., & Lanzas, N., 2006)

This intervention aimed to create a basis for adolescents to actively contribute to the development and reduction of violence (including youth gang violence) within their own communities. Four NGOs led the intervention consortium, which included other national and foreign partners including the Nicaraguan Ministry of Health, Ministry of Education, Ministry of Culture and Sports, The National Police and other community organizations, the Catholic University of Nijmegan as a technical advisor and CIDENIC – the National Nicaraguan Agency for Research and Development – as a monitor. The intervention strategy was to train and form organized groups of adolescents – clubs – in each of ten target communities. Each club had the same structure with six or seven elected members as leaders and they would have meetings with the participants where they would elaborate and
negotiate an agenda to improve their own communities and make quarterly action plans with specified actions for each of the members. The teenagers received training on how to elaborate a local agenda of each suburb and turn them into action plans, and they had an allocated budget administered by the consortium. After that they would gather and elaborate a common Agenda for the District. In addition to that, adolescents from the target communities received training in a set of subjects that aimed to address community problems such as reproductive health, violence prevention, project design, and youth leadership.

Creating intergroup connections may reduce gang violence

Strengthening the community ties of adolescents with other groups of adolescents was reported as reducing conflicts between gangs – but only while the connection is active. In this study, adolescents held sports competitions between different barrios and reportedly became good friends with teenagers in other neighborhoods (Pastrán & Lanzas, 2006: 40). Based on the content of their interviews, the authors suggest that the potential for violent conflicts decreased because the claims and demands of young people were addressed through an alternative channel.

“En Villa Venezuela los jóvenes del sector A no se llevan bien con los del G, pero en los deportes juegan y no hay pleitos, ni roces. Ha disminuido la violencia, porque antes se agarraban a pedradas todos los días. A través de los grupos deportivos se ha logrado una mejor convivencia, antes había mucho pleitos entre las integrantes del equipo, ahora estamos más unidas”.

(Adolescente de Villa Venezuela) (Pastrán & Lanzas, 2006, p.30)

[Free translation: “In Villa Venezuela the kids from sector A did not get along with those from sector G, but when they play sports there are no disputes or tensions. Violence has decreased because before that they would stone fight everyday. Through the sports groups they have come to getting along better. Before there were too many disputes among the members of their teams, but now we are more united.” (Adolescent from Villa Venezuela)]

"Ha disminuido la violencia, la mayoría de los jóvenes han cambiado, los que vienen a molestar son de otros barrios”. (Actor social barrio Enrique Schmidt)

[Free translation: It has reduced violence, most young people have changed, those who come to disturb are from other neighborhoods. (Social Actor/member of the community neighborhood Enrique Schmidt)]

The involvement of parents is important to interventions involving adolescents
The authors note that the intervention had limited involvement from parents of club members and this factor limited the participation and engagement of club members, because the young people still had a degree of dependence on their parents.

“La participación de madres y padres en el Proyecto fue limitada, esta situación debilitó la participación de los y las adolescentes. El aprendizaje de esto es que padres y madres juegan un papel importante en la generación de violencia y educación de sus hijos/as.” (Pastrán & Lanzas, 2006: 39).

[Free translation: Participation of parents in the intervention was limited and this situation hindered participation of adolescents. A lesson learned is that parents play an important role in generation of violence and education of their children.]

Consideration for the role of parents in supporting adolescent involvement in youth leadership and community development are crucial for sustainability of the initiatives and to maximize access and engagement (Pastrán & Lanzas, 2006: 40). Although this is a clear conclusion from the study, it is not clear whether this finding is drawn from interviews, document reviews or focus groups.

6.3.4 A camping expedition with rival manchas: Ayacucho, Peru. (Strocka, C., 2009)

The Camping Expedition with Rival Manchas in Ayacucho, Peru was part of a much larger, longer-term participatory study which aimed to “examine whether, and how, the recent rise in mancha activity was linked to the previous political violence” (Strocka: 105) and “explore the characteristics and social functions of the local manchas” (Strocka: 105). The camping expedition component of the research project constituted an intervention that “aimed to change the behaviour and attitudes of participants and to reduce intergang conflict by means of a quasi-field experiment” (Strocka: 105). The camping expedition took place over four days in a bush camp setting outside the city. Participants were 25 male mancha members from 4 different manchas. It was designed to find “a way to break the vicious circle of violent intergroup conflict” and to “test whether enmity and violent conflict between manchas could be reduced by bringing them into contact with each other under non-violent and non-competitive conditions” (Strocka: 108). The evaluation involved a pre-post questionnaire and participant observation to record individual & intergroup interactions. Evaluation meeting with participants from each of the four participating manchas were held on the final day. Follow-ups via observation and conversations took place during the following three months.

Contact interventions to reduce tension and violence between gang members may have a role to play in stabilizing gang relationships and reducing violence as a lead-in to larger intervention programs aimed at mancheros, but they must be integrated with these programs to take place immediately prior to or within a few months of program implementation.
Follow-up observations and conversations suggested that positive outcomes from the camp persisted for the first three months following the camp, and some mancheros were even able to visit one another across turf boundaries. In the three months there was no report of any violence between the four participant manchas, although all of the participant manchas were involved in street violence with non-participant manchas during this time. Two of the manchas implemented the community improvement project they had planned during the camp with the support of other local community organizations (Strocka, 2009: 128).

However, within a matter of months of the end of the larger project, emails from members of two of the manchas with the author indicated that “four manchas that participated in the camp are again fiercely fighting each other.” (Strocka, 2009: 129). Strocka (2009) suggests that the short-term peace following the bush camp intervention was based on the intergroup contact at an individual level. However, unlike gang membership in other parts of Latin America, mancha membership is considered a “transitory life phase” with mancha members “free to leave at any time” (Strocka, 2009: 107). Strocka notes that the participants in her study indicated that they had joined the gangs voluntarily and were free to leave at any time. The very rapid turnover of mancha membership, through maturing out, imprisonment and murder mitigates against the longer term sustainability of any change, as individuals leave the group (Strocka, 2009: 129).

Based on these findings, there may be scope for carefully facilitated contact interventions as a lead in to education, employment and cultural programs which may otherwise be destabilized by enmity and violence of different manchas participating in the programs. However, the author suggests that contact interventions would need to align with and be timed to precede the planned programs as closely as possible (Strocka, 2009: 129).

**Intergroup contact interventions may have the capacity to break down stereotypes about gangs and gang activity**

Participants in the bush camp filled in a questionnaire a few days before the camp and another at the end of the camp. The measure aimed to test for an improvement in intergroup relations, a reduction in reported negative intergroup emotions, and increase in reported positive intergroup emotions and a decrease in violent intergroup conflict alongside the development of friendships between members of rival manchas (Strocka: 114). Mean scores of perceived relations between the four manchas measured before and after the camp; between members within each mancha and level of identification with the mancha of origin.

Quantitative assessment of the intervention was based on a one-way repeated measures analysis of variance conducted to compare relations between the four rival manchas at T1 and T2. There was statistically significant improvement of intergroup relations over time which corresponds to an effect size of Partial Eta Squared = .67. These intergroup relations improved on average and for all possible ingroup-outgroup pairs (Strocka: 126). There was no improvement in intragroup relations or identification with the mancha. The number of new cross-mancha friendships was also recorded at the end of the camp with only one of 21
participants indicating that they didn’t make any new friendships (Strocka: 128). Whilst this quantitative evaluation did not meet the thresholds of robustness for impact evaluation as there was no control group, it does provide some indication of a change in outgroup relations that may be due to implementation, particularly as there was no corresponding change in ingroup relations.

Strocka (2009) argues that the evidence from the study has policy implications because it demonstrates the possibility of breaking down some of the stereotypes about _mancheros_ and _mancha_ violence through contact interventions. The author suggests that the study undermines “widespread assumptions that _manchas_ exist ‘for the sake of violence’ or that individual members are ‘violent by nature’” (Strocka: 2009: 30). By cooking, learning, planning and playing together, the study demonstrated the ability of individual _manchas_ to form friendships across gang boundaries and desist from violence in the short term.

### 6.3.5 Cross-cutting themes and issues

The limited number of studies which were eligible for inclusion necessitates that all findings from this review are tentative. Rather than providing a clear menu of best-practices, these tentative findings should be considered as points for consideration to direct further rigorous evaluations of programs targeted at youth gangs. The following five themes are noted as cutting across more than one of the included studies.

1. **Interventions at both the secondary (Pastrán & Lanzas, 2006) and tertiary (Strocka, 2009; McLean & Lobban, 2009) levels that target youth at risk and youth gang members must appeal to youth.** The arts, sport, dance and drama were used in three of the four studies to broker engagement across gang turf and to draw youth together in mutual support to combat high levels of social exclusion associated with gang membership.

2. **Strengthening the community ties of at-risk adolescents with other groups of adolescents may reduce conflicts between gangs, but only if ties are kept active.** Three studies (McLean & Lobban, 2009; Pastrán, & Lanzas, 2006; Strocka, 2009), referenced the fragility of programs which aimed to bring youth together across gang lines. The fluidity and fragility of youth gang structure mitigates against longer-term impact of interventions based on individual contact.

3. **The ability of service providers to intervene to provide alternative opportunities for youth is severely hampered by ongoing violence and gang involvement.** Two authors make this point: Strocka (2009) and McLean and Lobban (2009). Demobilization and reconciliation activities are at the core of both of these programs as a condition for social and economic interventions aimed at comparing structural disadvantage. The intervention of the Evangelical Church in providing alternative social and economic opportunities is also premised on a cessation on the part of gang members from gang activities (Brenneman, 2009).
4. The leadership role of gang members and at risk youth in interventions was considered to be vital. Engaging with gang members and at risk youth and identifying their challenges and priorities was at the core of each of the four programs. In the contact camping expedition, *mancha* leaders were involved in the design and implementation of the program from the outset (Strocka, 2009). In the case of the PMI, the success of the intervention rested on the involvement of gang leaders to bring about peace (McLean & Lobban, 2009). In the case of Evangelical conversion, the church acted as a conduit to ‘unbecoming a homie’, but it was the gang member’s agency that was required to sever gang ties (Brenneman, 2009). In the case of the secondary intervention with youth leaders in Nicaragua (Pastrán, & Lanzas, 2006) the youth set the agenda for action.
7 Discussion

7.1 SUMMARY OF MAIN RESULTS

7.1.1 Effectiveness of preventive gang interventions

This systematic review was unable to draw conclusions on the effectiveness of preventive gang interventions, as there was no sufficiently robust empirical evaluations that met the inclusion criteria.

7.1.2 Reasons for implementation success or failure

The review of reasons for success or failure of the implementation of preventive gang interventions was a synthesis of the findings from quantitative or qualitative evaluations of interventions, where the study met three basic methodological benchmarks (reporting on sampling, data collection and analysis). The search and screening process identified four eligible studies. There were three tertiary interventions and one secondary intervention, all of which were conducted in Latin America or the Caribbean, and none of which were published in peer-reviewed journals. The review synthesized the conclusions, lessons learned, gaps, and implementation success or failure factors raised by the evaluation authors. The eligible studies were quite disparate in nature, offering specialized findings for gang intervention; however, four tentative common themes were identified.

First, for an intervention to be successfully implemented, it must appeal to youth. Programs that provided alternate avenues of engagement for youth, such as art, sport, dance and drama were identified as engaging youth in alternative activities, which helped to combat the social exclusion associated with gang membership.

Second, programs that aim to strengthen community ties can be short lived if the programs are not sustained through ongoing activities. Bringing together youth across gang lines may help form inter-group ties whilst the program is underway, but the interpersonal relationships formed may not be enough to sustain a lasting peace, particularly where there is high turnover of gang membership. Similarly, gang exit via evangelical conversion is only respected by the gang for as long as religious involvement is actively maintained.

Thirdly, ongoing violence hampers programs that offer alternative opportunities for youth. Two of the studies identify that demobilization and reconciliation activities are central to the
sustainability of social and economic interventions.

Finally, active engagement from gang members and at-risk youth is central to the implementation of preventive interventions. Each of the studies identified that it was important to engage the youth and allow them to retain a sense of agency if the program was to be successfully implemented.

### 7.2 OVERALL COMPLETENESS AND APPLICABILITY OF EVIDENCE

#### 7.2.1 Completeness of the evidence

This review had a very broad scope – geographically, substantively and methodologically. Nonetheless, only four studies were identified that evaluated the reasons for implementation success or failure, and no studies were identified that evaluated the effectiveness of preventive gang interventions. As such, this review cannot draw conclusions about the effectiveness of gang preventive interventions, despite the abundance of programs that are implemented in low- and middle-income countries, and can only draw on the author conclusions from a very limited number of studies to discuss the barriers and facilitators of successful interventions.

Despite the extremely low numbers of eligible studies, we are confident that the number of studies identified is complete in the sense that all eligible studies have been identified. The search of the published and unpublished literature was extensive and conducted in multiple languages. The screening process was thorough; to ensure that no studies had been missed in the screening, we rescreened each study that had been identified as located in a low- or middle-income country and related to youth gangs in the broadest sense. We conducted an extensive document harvesting exercise; all interventions mentioned in these documents were researched and we attempted to identify and contact the agency in charge of the program. We emailed our advisory group of experts in the field, as well as NGOs and government agencies that we had identified as being likely to deal with gang interventions. No further eligible studies were identified.

#### 7.2.2 Reasons for the lack of evidence

It seems there is a lack of studies evaluating the effectiveness of preventive interventions targeting youth gangs in low- and middle-income countries for three main reasons. Firstly, much of the literature was focused on the broader categories of youth violence or armed violence (particularly the literature from African nations), and does not specifically address gangs or gang membership. Secondly, we suggest that much of the focus of the gang literature (particularly the literature from Latin America) is more on the lived experience of the gang member and less on the effectiveness or otherwise of preventive interventions. And thirdly, there is a large literature that makes claims of intervention effectiveness, but as we have seen, none of the literature evaluates these claims using robust quantitative study designs, and only a very small subset (n=4) provide robustly reported qualitative evaluations
of reasons for implementation success or failure.

Many documents make reference to preventive interventions and their “known” effectiveness, but frequently this knowledge is theoretically derived, the product of author opinion, or only supported by pre-post analyses of outcomes with no control group – a quantitative approach that is associated with a high risk of bias. Many studies examine interventions that are focused on at-risk youth more broadly, and whilst there may be applicability to youth gangs, the direct associations are not explicitly tested. Our reference harvesting exercise searched for any further information on all interventions that were identified in full text documents, yet we were not able to locate any further quantitative or qualitative evidence of effectiveness or implementation success.

### 7.2.3 Applicability of the evidence

It is an understatement to say that the evidence on preventive gang interventions in low- and middle-income countries is sparse, and with such a small number of studies, it is important to note that these findings are unlikely to be generalizable. Of note, none of the included studies were conducted outside of Latin America or the Caribbean, and so this review has no ability to conclude anything about other geographic contexts.

### 7.3 QUALITY OF THE EVIDENCE

None of the four studies that form the basis of the review of reasons for implementation success or failure were evaluated as having a low study quality, based on their assessment against the Critical Appraisal Skills Programme (CASP) Qualitative Research Checklist tool. It is important to note, however, that these studies are assessed as qualitative research only, and that any quantitative evaluation components do not reach a minimum methodological standard. They are therefore of sufficient quality to be used to identify barriers or facilitators of implementation success, but not to establish whether the programs were actually successful in reducing gang membership or gang crime.

### 7.4 LIMITATIONS AND POTENTIAL BIASES IN THE REVIEW PROCESS

The major limitation of this review is the complete lack of evidence on program effectiveness, and the very small number of studies identified that assessed implementation success. Consequently, there is limited geographic coverage about implementation success, and due to the diversity of the interventions identified, there is no capacity to triangulate the findings using multiple interventions of the same type. The review identified three tertiary interventions and only one secondary intervention, with no evidence at all available on the implementation of primary preventive gang interventions. These limitations are significant.
It is plausible that with a broader scope to the review that we would have identified more studies. There are two scope constraints that may have contributed to the limited findings: the definition of youth gangs, and the restriction to low- and middle-income countries. Future reviews may wish to expand our criteria to examine other forms of gangs and high-income countries. Similarly, a synthesis of studies that estimate the prevalence of gangs internationally would make a strong contribution to the literature.

7.5 AGREEMENTS AND DISAGREEMENTS WITH OTHER STUDIES OR REVIEWS

There are currently no other systematic reviews of the effectiveness of preventive gang interventions in either low- and middle-income countries against which to assess our findings.
8 Authors’ Conclusions

8.1 IMPLICATIONS FOR PRACTICE AND POLICY

This systematic review searched for both quantitative and qualitative evidence on preventive gang interventions in low- and middle-income countries, and located a very small number of studies with which to evaluate the barriers and facilitators of successful program implementation. For policy-makers and practitioners, we suggest that the key themes can be used as reminders of the issues that can influence the implementation of a new preventive gang intervention. The results of the review suggest that secondary or tertiary preventive gang interventions may more likely to be viewed as successfully implemented where there is:

- a range of program components that appeal to youth,
- programs that offer continuity of social ties outside of the gang,
- a recognition that ongoing violence and gang involvement can severely limit successful implementation, and
- active engagement of youth, where their agency is embraced and leadership is offered.

8.2 IMPLICATIONS FOR RESEARCH

This review highlights the lack of robust evaluation research from which policy-makers and practitioners can hope to identify best-practice in gang reduction in low- and middle-income countries. It is clear from the results of the search that there is interest in the topic from academics, NGOs and government agencies; indeed, the review identified over 350 documents focusing on youth gangs in low- and middle-income countries. Similarly, we know that there is a range of preventive interventions being implemented in the field; the document harvesting exercise identified 78 specific interventions that were discussed in the literature.

What is missing is evaluation research methodologically robust that can be used to assess the impact of preventive interventions. We urge researchers, policy-makers and practitioners to address this imbalance when new preventive gang interventions are put in the field, and to incorporate evaluations into the lifecycle of implementation.
In particular, we encourage future research to include the types of evaluations that can be used to address causal questions. To establish whether a program is effective in changing a particular outcome (such as gang membership), the evaluation must control for other potential influences on the outcome. Ideally, the study design would use a randomized control trial methodology (RCT), as this is the most rigorous experimental design.

RCTs take a set of subjects or places, and randomly assign each subject or place to one of two groups: the intervention or treatment group where the program is implemented; or a control condition where the program is not implemented. When the outcome is measured after the program has taken place, any difference between the treatment group and the control group can be confidently attributed to the program.

When it is either impractical or unethical to randomly assign the participants, quasi-experimental techniques can be used, where alternate sources of impact on the outcome are controlled for. This can be accomplished by creating two groups that are matched on important characteristics (again, one with the program and one without) or by taking measurements of the outcome before and after the program in both groups and comparing whether the change in the treatment group is different to that seen in the control group.

Unfortunately, these techniques are not yet widely used in the evaluation of crime prevention programs in low- and middle-income countries. Indeed, gang research in high-income countries also frequently suffers from a lack of robustness in evaluation. Many researchers rely on measuring the difference in the outcome before and after the intervention, but only amongst the participants or location that had the intervention. This pre-post approach leads to results that are highly biased, as without a control group it is not possible to know whether the change in the outcome is different to what might have occurred without the intervention, and is instead simply a reflection of a wider trend.

There are a huge number of preventive gang programs currently in the field, and many studies that assert their effectiveness. Unfortunately there is no rigorous evidence to substantiate those assertions. We urge the research community to engage with the practitioner community and develop a program of rigorous evaluation, both quantitative and qualitative, in order to establish a benchmark for best practice and to systematically capture important organizational learning.
9 References

9.1 REFERENCES TO INCLUDED STUDIES


### 9.2 REFERENCES TO EXCLUDED STUDIES & REASONS FOR EXCLUSION

This table lists each unique reference and the reason for exclusion. Screening criteria were assessed in order, and screening stopped after the first ‘No’ answer.

<table>
<thead>
<tr>
<th>Reference</th>
<th>LMIC</th>
<th>Youths gangs</th>
<th>Preventive Interventions</th>
<th>10-29 years old</th>
<th>Evaluates reasons</th>
<th>Eligible study design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Journal/Book/Website</td>
<td>DOI</td>
<td>Year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>-------</td>
<td>----------------------</td>
<td>-----</td>
<td>------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alderete, E.</td>
<td>Western development and the health of indigenous peoples. Behavioral aspects of cultural change and cultural persistence in the Andes</td>
<td>(Doctoral dissertation, University of California, Berkeley, USA)</td>
<td></td>
<td>1996</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alexandrescu, G.</td>
<td>Street children in Bucharest</td>
<td>Childhood, 3, pp. 267-270</td>
<td></td>
<td>1996</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allan, P., Guilfoyle, D., Capello, A.</td>
<td>In-depth evaluation of the Counter Piracy Programme: Combating maritime piracy in the Horn of Africa and the Indian Ocean Increasing regional capacities to deter, detain and prosecute pirates</td>
<td>United Nations O</td>
<td></td>
<td>2013</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attincapa, Z.</td>
<td>Center for Acquiring a Trade for Street Kids</td>
<td>Sivil Toplum, 4(16), pp. 140-142</td>
<td></td>
<td>2006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amaya Holguin, T.</td>
<td>Baloncoli, deporte por la paz: un caballo de Troya a la violencia escolar</td>
<td>Revista Educación física y deporte, n. 29-2, 299-304</td>
<td></td>
<td>2005</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amemiya, I., Oliveros, M., &amp; Barrientos, A.</td>
<td>Factores de riesgo de violencia escolar (bullying) severa en colegios privados de tres zonas de la sierra del Peru</td>
<td>Anales de la Facultad de Medicina, 70(4), 255-8</td>
<td></td>
<td>2009</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Andrade, C. C. D.</td>
<td>Entre gangues e galeras: juventude, violência e sociabilidade na periferia do Distrito Federal</td>
<td></td>
<td>Y Y N</td>
<td>2007</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Journal/Publication Details</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Barnes, N. (2007). Executive Summary: Transnational youth gangs in Central America, Mexico, and the United States. Center for Inter-American Studies and Programs at the Instituto Tecnológico Autónomo de México, the Ford Foundation and the Kellogg Foundation


Y N Y Y Y N Y Y N Y Y Y N Y N N N Y Y Y N
<p>| <strong>Brenneman II, R. E. (2010)</strong> From home to hermano: Conversion and gang exit in Central America (Doctoral dissertation, University of Notre Dame) | Y Y Y Y Y N |
| <strong>Briscoe, I., &amp; Rodríguez Pellecer, M. (2010).</strong> A state under siege: Elites, criminal networks and institutional reform in Guatemala. Netherlands Institute of International Relations Clingendael. | Y N |
| <strong>Carpena Mendez, J (2006)</strong> Growing up across furrows, letters, and borders: Childhood, youth, and the everyday in neoliberal rural Mexico (doctoral dissertation, University of California, Berkeley) | Y Y N |</p>
<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Year</th>
<th>Journal</th>
<th>DOI</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castelnuovo, A. (1990)</td>
<td>La Adolescencia Como Fenomeno Cultural (Adolescence as a cultural phenomenon).</td>
<td>Y</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Castillo Berthier, H. (2002)</td>
<td>De las bandas a las tribus urbanas: De la transgresion a la nueva identidad social. (From Gangs to Urban Tribes: From Transgression to a New Social Identity). Desacatos, 9, 57-71.</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Cesar, M. K. (2010)</td>
<td>Juvenile delinquency: Examining the impact of family structure, violence committed against youth, and violence committed by youth living in Haiti, (Doctoral dissertation, Walden University, Minneapolis, Minnesota, USA)</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Chetty, V. R. (1997)</td>
<td>Street Children in Durban: An Exploratory Investigation, ERIC Clearinghouse.</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Choo, K. S. (2006)</td>
<td>Gangs and Immigrant Youth. LFB Scholarly Publishing LLC.</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Author</th>
<th>Title</th>
<th>Journal/Book</th>
<th>Year</th>
<th>DOI</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diaz, J. S.</td>
<td>Criminal behaviour in Colombia.</td>
<td>Revista Latinoamericana de Psicología</td>
<td>2001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diversi, M., Filho, N. M. &amp; Morelli, M.</td>
<td>Daily Reality on the Streets of Campinas, Brazil.</td>
<td>New Directions for Child and Adolescent Development</td>
<td>1999</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dudley, S.</td>
<td>Transnational crime in Mexico and Central America: Its evolution and role in international migration.</td>
<td>Migration Policy Institute</td>
<td>2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dueñas1 Sr, L., &amp; Chávez, L.</td>
<td>Violencia y delincuencia infanto juvenil: Reflexiones acerca de un importante desafío para la Salud.</td>
<td>Revista Chilena de Psiquiatría y Neurología De La Infancia y Adolescencia</td>
<td>2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dukes, R. L. &amp; Valentine, J.</td>
<td>Gang membership and bias against young people who break the law.</td>
<td>The Social Science Journal</td>
<td>1998</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Durst Johnson, C</td>
<td>Youth Gangs in Literature.</td>
<td>Recent Contributions in Exploring Social Issues Through Literature.</td>
<td>1994</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Year</td>
<td>Journal/Source</td>
<td>DOI/URL</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
<td>------</td>
<td>----------------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>Elbert, C. A.</td>
<td>La violencia social en américa latina a través del caso centroamericano de las bandas juveniles &quot;Maras&quot; [Social violence in Latin America. The case of the central american gangs, or &quot;Maras&quot;].</td>
<td>2006</td>
<td>SABER-ULA, Universidad de Los Andes - Mer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Erickson, M., &amp; Jensen, G. F.</td>
<td>&quot;Delinquency is still group behavior!&quot;: toward revitalizing the group premise in the sociology of deviance.</td>
<td>1977</td>
<td>Journal Of Criminal Law &amp; Criminology, 68(2), 262-273</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ESCOBAR MOLINA, A.</td>
<td>Situations extrêmes de séparation en Amérique Latine (Colombie). Neuropsychiatrie de l'enfance et de l'adolescence, 42(8-9), 586-590.</td>
<td>1994</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Esser, J. W.</td>
<td>From hyperghettoization to the hut: Dilemmas of identity among transmigrant tipoti in the Kingdom of Tonga (Doctoral dissertation, University of Minnesota)</td>
<td>2012</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estrada, B. C.</td>
<td>Youth gangs in central america: A comparative analysis of las maras in honduras and nicaragua. (Order No. MR46158, Saint Mary's University (Canada)). ProQuest Dissertations and Theses.</td>
<td>2008</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Year</td>
<td>URLs/Notes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>--------</td>
<td>------</td>
<td>------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiexa Pampols, C.</td>
<td>Bandas o Castas Neobarrocas en Ciudad de Mexico (Neo-baroque gangs and castes in Mexico City), Cuadernos Hispanoamericanos, 621, pp. 7-23.</td>
<td>2002</td>
<td>Y Y N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fiexa, C.</td>
<td>Urban Tribes and the &quot;Chavos Gang&quot;: Juvenile Cultures in Catalonia and Mexico, Neua Antropologia, 14(47), p. 71</td>
<td>1995</td>
<td>Y Y N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Filgueras, A.</td>
<td>Needs of Rio street children. Planned Parenthood Challenges, Issue 2, pp.22-4</td>
<td>1993</td>
<td>Y N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Journal/Publication Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glaser, C.</td>
<td>'We must infiltrate the Tsotsis': school politics and youth gangs in Soweto</td>
<td>Journal Of Southern African Studies, 24(2), 301-323.</td>
</tr>
<tr>
<td>Gómez-Restrepo, C., Padilla, A., Rodríguez, V., Guzmán, J., Mejía, G., Avella-García, C., &amp; González, E.</td>
<td>Influencia de la violencia en el medio escolar y en sus docentes: Estudio en una localidad de Bogotá, Colombia</td>
<td>Revista Colombiana de Psiquiatría,</td>
</tr>
<tr>
<td>Title</td>
<td>Authors</td>
<td>Year</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Mexico’s struggle with 'Drugs and Thugs'</td>
<td>Grayson, G.W.</td>
<td>2009</td>
</tr>
<tr>
<td>¿Qué sirve en la prevención de la violencia juvenil?: [revisión], Salud pública Méx, 50(supl.1), s86-s92.</td>
<td>Guerrero, R.</td>
<td>2008</td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Journal</td>
</tr>
<tr>
<td>-----------</td>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td>Harvey, R.</td>
<td>From paper to practice: An analysis of the juvenile justice system in Honduras.</td>
<td>Children’s Legal Centre</td>
</tr>
<tr>
<td>Heap, S.</td>
<td>'Jaguda Boys': Pickpocketing in Ibadan, 1930-60, Urban History</td>
<td>24(3)</td>
</tr>
<tr>
<td>Hearn, L.</td>
<td>Working with urban youth: experiences from Medellin, Colombia, Community Development Journal</td>
<td>29(4)</td>
</tr>
<tr>
<td>Hecht, T.</td>
<td>Street Ethnography: Some Notes on Studying and Being Studied, Focaal: tijdschrift voor antropologie</td>
<td></td>
</tr>
<tr>
<td>Heim, J., &amp; de Andrade, A. G.</td>
<td>Efeitos do uso do álcool e das drogas ilícitas no comportamento de adolescentes de risco: uma revisão das publicações científicas entre 1997 e 2007.</td>
<td>Revista de Psiquiatria Clinica</td>
</tr>
<tr>
<td>Heinonen, P.</td>
<td>Youth gangs and street children: Culture, nurture and masculinity in Ethiopia.</td>
<td>New York: Berghahn Books</td>
</tr>
<tr>
<td>Heitmeyer, W. &amp; Legge, S.</td>
<td>Youth violence and social disintegration, New Directions for Youth Development</td>
<td>119.</td>
</tr>
<tr>
<td>Hendriks, M., Ponsaers, P. &amp; Kinyamba, S. S.</td>
<td>Street children in Kinshasa. Striking a balance between perpetrator and victim through agency.</td>
<td>Street children in Kinshasa. Striking a balance between perpetrator and victim through agency</td>
</tr>
<tr>
<td>Hensengerth, O.</td>
<td>Violence Research in Northeast and Southeast Asia: Main Themes and Directions, International Journal of Conflict and Violence</td>
<td>5(1)</td>
</tr>
<tr>
<td>Hernandez, E. E.</td>
<td>Power in Remittances: Remaking Family and Nation among Salvadorans (Doctoral dissertation, University of California, Irvine, USA)</td>
<td></td>
</tr>
<tr>
<td>Hoffman, J. S.</td>
<td>Youth violence, resilience and rehabilitation. USA: LFB Scholarly Publishing LLC.</td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Journal</th>
<th>Volume/Issue/Year</th>
<th>Pages</th>
<th>DOI/URL</th>
<th>Y/N</th>
<th>Y/N</th>
<th>Y/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Human Rights Clinic (IHRC)</td>
<td>No place to hide: Gang, state, and clandestine violence in El Salvador</td>
<td>Human Rights Program, Harvard Law School</td>
<td>2007</td>
<td>Retrieved from <a href="http://www.uscirefugees.org/2010Website/5_Resources/5_4_For_Lawyers/5_4_1%20Asylum%20Research/5_4_1_2_Gang_Related_Asylum_Resources/5_4_1_2_4_Reports/The_International_Human_Rights_Clinic_Human_Rights_Program.pdf">http://www.uscirefugees.org/2010Website/5_Resources/5_4_For_Lawyers/5_4_1%20Asylum%20Research/5_4_1_2_Gang_Related_Asylum_Resources/5_4_1_2_4_Reports/The_International_Human_Rights_Clinic_Human_Rights_Program.pdf</a></td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Jayawardena, C.</td>
<td>Farm, household and family in Fiji Indian Rural Society</td>
<td>Journal of Comparative Family Studies</td>
<td>1975</td>
<td>6(1), pp. 74</td>
<td>Y</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Johnston, V.</td>
<td>Chapter 8: An Ecuadorian Alternative: Gang Reintegration. In Small Arms Survey 2010.</td>
<td>2010</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Year</td>
<td>Journal/Source</td>
<td>DOI</td>
<td>URL</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>--------</td>
<td>------</td>
<td>----------------</td>
<td>-----</td>
<td>-----</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Juan Carlos Narváez Gutiérrez</td>
<td>Ruta transnacional: a San Salvador por los Ángeles. Espacio de interacción juvenil en un contexto migratorio</td>
<td>2007</td>
<td>Colección América Latina y el Nuevo Orden Mundial. México: Miguel Ángel Porrua, UAZ, Instituto Mexicano de</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kakar, S. S.</td>
<td>Gang membership, delinquent friends and criminal family members: Determining the connections</td>
<td>2005</td>
<td>Journal Of Gang Research, 13(1), 41-52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kaplan, C., Valdez, A. &amp; Cepeda, A.</td>
<td>Chapter 9: Getting past suppression - Street gang interventions. In Small Arms Survey 2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Karakus, M., Ulker, R., Cicek, V. &amp; Toremen, F.</td>
<td>Comparison of safety and emergency preparedness procedures and policies in US and Turkish K-12 schools, Anthropologist (New Delhi, India: 1999), 16 (1-2), pp. 373-393</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Katz, S. R.</td>
<td>Presumed guilty: How schools criminalize Latino youth. Social Justice, 24(4) (70), pp. 77-95</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keith, S. &amp; Martin, E.</td>
<td>Cyber-Bullying: Creating a Culture of Respect in a Cyber world, Reclaiming Children and Youth, 13(4), pp. 224-228</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title and Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author(s)</td>
<td>Title</td>
</tr>
<tr>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>Marquez, P.</td>
<td>Street is My Home: Youth &amp; Violence in Caracas, Stanford: Calif. Stanford University Press.</td>
</tr>
<tr>
<td>Martin Alvarez, Alberto</td>
<td>Transnational Interaction of the Central American Civil Society before the Youth Violence, América Latina, 50, p. 89.</td>
</tr>
<tr>
<td>Matchinda, B.</td>
<td>The impact of home background on the decision of children to run away: The case of Yaounde city street children in Cameroon, Child Abuse and Neglect, 23(3), pp. 245-255.</td>
</tr>
<tr>
<td>McCreery, K.</td>
<td>From street to stage with children in Brazil and Ghana, Annals of the American Academy of Political and Social Science, 575, pp. 122-146.</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Source</th>
<th>Year</th>
<th>Title</th>
<th>Pages/URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mores, A. (1985) Preliminary results of foster care of children at risk who have been transferred from a home for children and infants, Cesk Pediatr, 40(7), pp. 418-421.</td>
<td>Y N</td>
<td>Y N</td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Database</th>
<th>Year</th>
<th>DOI</th>
<th>Notes</th>
</tr>
</thead>
</table>


<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Publication Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pink, M., Butcher, J., &amp; Peters, C.</td>
<td>Psychological perspectives of development in and through community sport: The future in youth Soccer project, Baucau, East Timor. Journal of Science and Medicine in Sport, 14(1), pp. e78-e79. DOI:10.1016/j.jsam</td>
<td>N</td>
</tr>
<tr>
<td>Potter, A.</td>
<td>Armed violence prevention and reduction: A challenge for achieving the Millennium Development Goals. Geneva Declaration Secretariat.</td>
<td>Y Y Y N</td>
</tr>
<tr>
<td>Redo, S.</td>
<td>Six United Nations guiding principles to make crime prevention work. Deutscher Präventionstag.</td>
<td>Y Y N</td>
</tr>
<tr>
<td>Reisman, L.</td>
<td>Breaking the vicious cycle: Responding to Central American youth gang violence. The SAIS Review of International Affairs, 26(2), pp. 147-152.</td>
<td>Y Y N</td>
</tr>
<tr>
<td>Remington, F.</td>
<td>The forgotten ones. A story of street children and schooling in South Asia. Integration (Tokyo, Japan), 37, p. 40-42.</td>
<td>Y N</td>
</tr>
<tr>
<td>Restrepo, N.</td>
<td>Children and drugs. Perspectives. United Nations Office on Drugs and Crime.</td>
<td>Y Y Y Y N</td>
</tr>
<tr>
<td>Reyes Pastrán, I., &amp; Carrillo Lanza, N.</td>
<td>Protagonismo de los y las adolescentes en la misminucion de la violencia juvenil en díaz barrios del Distrito VI de Managua. 2001-2003.</td>
<td>Y Y Y Y Y N</td>
</tr>
<tr>
<td>Ribando Seelke, C.</td>
<td>Maras, Security and Development in Central America Task Force, University of Miami: Center for Hemispheric Policy.</td>
<td>Y Y Y Y N</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Reference</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver, E., Wilson, A. &amp; Lustig, R. (1988, December 4) The £2m bandits who dropped from the sky, The Observer.</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Silver, R. (2008). Identifying Children and Adolescents at Risk for Depression and/or Aggression. Online Submission.</td>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title and Source</th>
<th>Y/N</th>
<th>Y/N</th>
<th>Y/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author(s)</td>
<td>Title</td>
<td>Year</td>
<td>Type</td>
<td>URL</td>
</tr>
<tr>
<td>----------</td>
<td>-------</td>
<td>------</td>
<td>------</td>
<td>-----</td>
</tr>
<tr>
<td>Title</td>
<td>Reference</td>
<td>Y</td>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>----------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>United States Senate Caucus on International Narcotics Control (2012). Preventing a security crisis in the Caribbean. One Hundred Twelfth Congress Second Session.</td>
<td>Y</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Source</th>
<th>Status 1</th>
<th>Status 2</th>
<th>Status 3</th>
</tr>
</thead>
</table>

### 9.3 REFERENCES TO STUDIES AWAITING CLASSIFICATION

There are no studies awaiting classification.

### 9.4 REFERENCES TO ONGOING STUDIES

No ongoing studies were identified as eligible.

### 9.5 ADDITIONAL REFERENCES


10 Information about This Review

10.1 REVIEW AUTHORS

Lead review author:

Name: Angela Higginson
Title: Dr
Affiliation: School of Social Science,
The University of Queensland
Address: Campbell Road, St Lucia
City, State, Province or County: Brisbane, Queensland
Postal Code: 4072
Country: Australia
Phone: +617 3365 6307
Email: a.higginson@uq.edu.au

Co-author(s):

Name: Kathryn Benier
Title: Ms
Affiliation: The University of Queensland Institute for Social Science Research and Australian Research Council (ARC) Centre of Excellence in Policing and Security (CEPS)
Address: Campbell Road, St Lucia
City, State, Province or County: Brisbane, Queensland
Postal Code: 4072
Country: Australia
Email: k.benier@uq.edu.au
Name: Yulia Shenderovich  
Title: Ms  
Affiliation: Department of Psychiatry, University of Cambridge  
Address: Douglas House, 18b Trumpington Road  
City, State, Province or County: Cambridge  
Postal Code: CB2 8AH  
Country: United Kingdom  
Phone: +44 (0)1223 746055  
Email: ys416@medschl.cam.ac.uk

Name: Laura Bedford  
Title: Ms  
Affiliation: The University of Queensland Institute for Social Science Research and Australian Research Council (ARC) Centre of Excellence in Policing and Security (CEPS)  
Address: Campbell Road, St Lucia  
City, State, Province or County: Brisbane, Queensland  
Postal Code: 4072  
Country: Australia  
Phone: +617 3366 7475  
Email: l.bedford@uq.edu.au

Name: Lorraine Mazerolle  
Title: Professor  
Affiliation: The University of Queensland Institute for Social Science Research and Australian Research Council (ARC) Centre of Excellence in Policing and Security (CEPS)  
Address: Campbell Road, St Lucia  
City, State, Province or County: Brisbane, Queensland
10.2 ROLES AND RESPONSIBILITIES

- Content: Angela Higginson, Joseph Murray, Lorraine Mazerolle, Kathryn Benier, Laura Bedford

- Systematic review methods: Angela Higginson, Joseph Murray, Yulia Shenderovich

- Information retrieval: Yulia Shenderovich, Kathryn Benier, Laura Bedford

10.3 SOURCES OF SUPPORT

Internal funding:

Support for this study will be provided by the Institute for Social Sciences Research, the University of Queensland, and the ARC Centre of Excellence in Policing and Security.

External funding:

This review is externally funded by USAID through 3ie (International Initiative for Impact Evaluation, Inc.) (SR/1117). The views expressed in this article are not necessarily those of USAID or 3ie or its members.
Funding for the broader database searching (Murray et al., 2013) was provided by the Wellcome Trust [089963/Z/09/Z]

10.4 DECLARATIONS OF INTEREST

None of the authors have any known conflict of interest.

10.5 PLANS FOR UPDATING THE REVIEW

The authors plan to update the review every five years.

10.6 AUTHOR DECLARATION

Authors’ responsibilities

By completing this form, you accept responsibility for maintaining the review in light of new evidence, comments and criticisms, and other developments, and updating the review at least once every five years, or, if requested, transferring responsibility for maintaining the review to others as agreed with the Coordinating Group. If an update is not submitted according to agreed plans, or if we are unable to contact you for an extended period, the relevant Coordinating Group has the right to propose the update to alternative authors.

Publication in the Campbell Library

The Campbell Collaboration places no restrictions on publication of the findings of a Campbell systematic review in a more abbreviated form as a journal article either before or after the publication of the monograph version in Campbell Systematic Reviews. Some journals, however, have restrictions that preclude publication of findings that have been, or will be, reported elsewhere, and authors considering publication in such a journal should be aware of possible conflict with publication of the monograph version in Campbell Systematic Reviews. Publication in a journal after publication or in press status in Campbell Systematic Reviews should acknowledge the Campbell version and include a citation to it. Note that systematic reviews published in Campbell Systematic Reviews and co-registered with the Cochrane Collaboration may have additional requirements or restrictions for co-publication. Review authors accept responsibility for meeting any co-publication requirements.

I understand the commitment required to update a Campbell review, and agree to publish in the Campbell Library. Signed on behalf of the authors:

Form completed by: Angela Higginson Date: 20 March 2015
## 11 Appendices

### APPENDIX A: SEARCH STRATEGY STRUCTURE

**A AND B AND D**

or

**C AND D**

<table>
<thead>
<tr>
<th>Concept</th>
<th>Search terms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A</strong></td>
<td>aggression, antisocial behaviour, behavior disorder, behavior problem, bullying, conduct disorder, conduct problem, crime, criminal behavior, disruptive behaviour disorder, externalising, externalizing, gang, homicide, oppositional defiant disorder, school violence, social behavior disorders, violence, violent crime, workplace violence</td>
</tr>
<tr>
<td><strong>B</strong></td>
<td>child, youth, infant, baby, toddler, adolescent, teenager</td>
</tr>
<tr>
<td><strong>C</strong></td>
<td>juvenile delinquency, child behavior disorders, school violence</td>
</tr>
<tr>
<td><strong>D</strong></td>
<td>workplaces, workplace violence, violent crime</td>
</tr>
</tbody>
</table>
• Africa or Central Africa or Latin America or Caribbean or West Indies or Eastern Europe or Soviet or South America or Arab or Middle East or Latin America or Central America
• Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelorussia or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Herzegovina or Botswana or Brazil or Brazil or Bulgaria or Burkina Faso or Burkina Faso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameroon or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoros or Comoros or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timor or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guam or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Malaysia or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Nagaland or Nepal or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philippines or Phillipines or Phillipines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadjikistan or Tadzhikistan or Tadjikistan or Tanzania or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia
• LMICs
• developing/less developed/under developed/underserved/deprived/poor countries
• transitional countries
developing countries

juvenile delinquency
child behavior disorders
social behavior disorders
conduct disorder
aggression
crime
bullying
homicide

child
infant
child health services
child welfare
child behavior
child care
child development
### Non-English search terms

<table>
<thead>
<tr>
<th>Chinese</th>
<th>French</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cbullying</td>
<td>juvenile delinquency</td>
</tr>
<tr>
<td>欺负问题</td>
<td>homicide</td>
</tr>
<tr>
<td>bullying / school violence</td>
<td>homicide</td>
</tr>
<tr>
<td>校园霸凌 / 校园暴力</td>
<td>trouble oppositionnel avec provocation</td>
</tr>
<tr>
<td>child behaviour disorder</td>
<td>Oppositional Defiant Disorder</td>
</tr>
<tr>
<td>儿童行为问题</td>
<td>violence</td>
</tr>
<tr>
<td>child conduct problems</td>
<td>risqué</td>
</tr>
<tr>
<td>儿童品行问题 / 品行问题</td>
<td>risky</td>
</tr>
<tr>
<td>child conduct problems + risk factors</td>
<td>délinquance</td>
</tr>
<tr>
<td>儿童品行问题 + 危险因素</td>
<td>delinquency</td>
</tr>
<tr>
<td>conduct disorder</td>
<td>délinquance juvenile</td>
</tr>
<tr>
<td>品行障碍</td>
<td>juvenile delinquency</td>
</tr>
<tr>
<td></td>
<td>Afrique</td>
</tr>
<tr>
<td></td>
<td>Africa</td>
</tr>
<tr>
<td></td>
<td>Congo</td>
</tr>
<tr>
<td></td>
<td>Cameroon</td>
</tr>
<tr>
<td></td>
<td>Cameroon</td>
</tr>
<tr>
<td>Arabic</td>
<td>English</td>
</tr>
<tr>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>Child</td>
<td>Disruptive behaviour disorder</td>
</tr>
<tr>
<td>Youth</td>
<td>Juvenile delinquency</td>
</tr>
<tr>
<td>Infant</td>
<td>Child behaviour disorders</td>
</tr>
<tr>
<td>Baby</td>
<td>School violence</td>
</tr>
<tr>
<td>Toddler</td>
<td>Egypt</td>
</tr>
<tr>
<td>Adolescent / Teenager</td>
<td>Sudan</td>
</tr>
<tr>
<td>Conduct problems</td>
<td>Iraq</td>
</tr>
<tr>
<td>Conduct disorders</td>
<td>Saudi Arabia</td>
</tr>
<tr>
<td>Oppositional defiant disorder</td>
<td>Yemen</td>
</tr>
<tr>
<td>Crime</td>
<td>Somalia</td>
</tr>
<tr>
<td>Aggression</td>
<td>Syria</td>
</tr>
<tr>
<td>Bullying</td>
<td>Tunisia</td>
</tr>
<tr>
<td>Homicide</td>
<td>Chad</td>
</tr>
<tr>
<td>Violence</td>
<td>Jordan</td>
</tr>
<tr>
<td>Social behaviour disorders</td>
<td>Eritrea</td>
</tr>
<tr>
<td>Criminal behaviour</td>
<td>United Arab Emirates</td>
</tr>
<tr>
<td>Antisocial behaviour</td>
<td>Lebanon</td>
</tr>
<tr>
<td>Behaviour problem</td>
<td>Kuwait</td>
</tr>
<tr>
<td>Affected child</td>
<td>Mauritania</td>
</tr>
<tr>
<td>English</td>
<td>Arabic</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------------------------------</td>
</tr>
<tr>
<td>School violence</td>
<td>العنف المدرسي / العنف في المدارس</td>
</tr>
<tr>
<td>Workplace violence</td>
<td>العنف في مكان العمل</td>
</tr>
<tr>
<td>Djibouti</td>
<td>جيبوتي</td>
</tr>
<tr>
<td>Bahrain</td>
<td>البحرين</td>
</tr>
<tr>
<td>Comoros</td>
<td>جزر القمر</td>
</tr>
<tr>
<td>Oman</td>
<td>عمان</td>
</tr>
<tr>
<td>Portuguese</td>
<td></td>
</tr>
<tr>
<td>criança</td>
<td>criança</td>
</tr>
<tr>
<td>lactente</td>
<td>lactente</td>
</tr>
<tr>
<td>adolescente</td>
<td>adolescente</td>
</tr>
<tr>
<td>psiquiatria infantil</td>
<td>psiquiatria infantil</td>
</tr>
<tr>
<td>comportamento infantil</td>
<td>comportamento infantil</td>
</tr>
<tr>
<td>desenvolvimento do adolescente</td>
<td>desenvolvimento do adolescente</td>
</tr>
<tr>
<td>comportamento do adolescente</td>
<td>comportamento do adolescente</td>
</tr>
<tr>
<td>quadrilha</td>
<td>quadrilha</td>
</tr>
<tr>
<td>crime</td>
<td>crime</td>
</tr>
<tr>
<td>violência</td>
<td>violência</td>
</tr>
<tr>
<td>Russian</td>
<td></td>
</tr>
<tr>
<td>насилие</td>
<td>насилие</td>
</tr>
<tr>
<td>оппозиционно-вызывающее поведение</td>
<td>оппозиционно-вызывающее поведение</td>
</tr>
<tr>
<td>вызывающее оппозиционное поведение</td>
<td>вызывающее оппозиционное поведение</td>
</tr>
<tr>
<td>расстройство</td>
<td>расстройство</td>
</tr>
<tr>
<td>оппозиционно-вызывающее расстройство</td>
<td>оппозиционно-вызывающее расстройство</td>
</tr>
<tr>
<td>расстройство</td>
<td>расстройство</td>
</tr>
<tr>
<td>оппозиционное вызывающее расстройство</td>
<td>оппозиционное вызывающее расстройство</td>
</tr>
<tr>
<td>расстройство</td>
<td>расстройство</td>
</tr>
<tr>
<td>оппозиционное расстройство</td>
<td>оппозиционное расстройство</td>
</tr>
<tr>
<td>неповиновения</td>
<td>неповиновение</td>
</tr>
<tr>
<td>преступность несовершеннолетних</td>
<td>преступность несовершеннолетних</td>
</tr>
<tr>
<td>преступность несовершеннолетних</td>
<td>преступность несовершеннолетних</td>
</tr>
<tr>
<td>экстернализация</td>
<td>экстернализация</td>
</tr>
<tr>
<td>банда</td>
<td>банда</td>
</tr>
<tr>
<td>преступность несовершеннолетних</td>
<td>преступность несовершеннолетних</td>
</tr>
<tr>
<td>Database</td>
<td>Search strategy</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>PsycINFO (Ovid)</td>
<td>1. developing countries/</td>
</tr>
<tr>
<td>1967 to 2013</td>
<td>2. (Africa or &quot;Latin America&quot; or Caribbean or &quot;West Indies&quot; or &quot;Eastern Europe&quot; or Soviet or &quot;South America&quot; or &quot;Middle East&quot; or &quot;Latin America&quot; or &quot;Central America&quot;).hw.ti,ab.</td>
</tr>
<tr>
<td></td>
<td>3. (Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroun or Cameroons or Cameron or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoros Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstan or Kyrgyzstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sarawak or Malawi or Niasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldovian or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Malaysia or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philippine or Philippines or Phillipines or Philippine or Portugal or Puerto Rico or Romania or Ruamania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator</td>
</tr>
</tbody>
</table>
Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadzhikistan or Tajikistan or Tadjik or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia).

4. ((developing or less* developed or under developed or underdeveloped or middle income or low* income or underserved or under served or deprived or poor* or foreign) adj (countr* or nation? or population? or world or region*)).hw,ti,ab,cp.

5. ((developing or less* developed or under developed or underdeveloped or middle income or low* income) adj (economy or economies)).hw,ti,ab.

6. (lmic or lmics or third world or lami countr*).hw,ti,ab.

7. transitional countr*.hw,ti,ab.

8. OR/1-7

9. antisocial behavior/
10. conduct disorder/
11. exp behavior problems/
12. behavior disorders/
13. impulse control disorders/
14. adjustment disorders/
15. violence/
16. exp violent crime/
17. workplace violence/
18. crime/
19. criminal behavior/
20. crime.mp.
21. crimes.mp.
22. criminal*.mp.
23. exp homicide/
24. homicid*.mp.
25. exp perpetrators/
26. attack behavior/
27. acting out/
28. exp gangs/
29. gang.mp.
30. gangs.mp.
31. exp bullying/
32. bully*.mp.
33. aggress*.mp.
34. aggressive behavior/
35. (conduct adj1 problem*).mp.
36. (behavio?r adj1 problem*).mp.
37. (conduct adj1 disorder*).mp.
38. (behavio?r adj1 disorder*).mp.
39. (antisocial adj1 behavio?r*).mp.
40. (anti-social adj1 behavio?r*).mp.
41. (oppositional adj1 defiant adj1 disorder*).af.
42. (disruptive adj1 behavio?r adj1 disorder*).af.
43. (externalizing adj1 behavio?r adj1 problem*).mp.
44. externalizing.mp.
45. externalising.mp.
46. externalized.mp.
47. externalised.mp.
48. externaliz*.mp.
49. externalis*.mp.
50. (childhood adj1 externalizing adj1 behavio?r).mp.
51. (externalizing adj1 behavio?r).mp.
52. (externalising adj1 behavio?r).mp.
53. OR/9-52

54. exp Childhood Development/
55. Adolescent development/
56. Child Welfare/
57. Child Care/
58. baby.ti,ab.
59. babies.ti,ab.
60. toddler.ti,ab.
61. toddlers.ti,ab.
62. adolescent*.ti,ab.
63. adolescent.ti,ab.
64. adolescents.ti,ab.
65. adolescence.ti,ab.
66. child*.ti,ab.
67. child.ti,ab.
68. children*.ti,ab.
69. childhood*.ti,ab.
70. childhood.ti,ab.
71. youth*.ti,ab.
72. youth.ti,ab.
73. youths.ti,ab.
74. student*.ti,ab.
75. Students.ti,ab.
76. Student.ti,ab.
77. teen*.ti,ab.
78. teenager.ti,ab.
79. teenagers.ti,ab.
80. boy.ti,ab.
81. boys.ti,ab.
82. girl.ti,ab.
83. girls.ti,ab.
84. pupil.ti,ab.
85. pupils.ti,ab.
86. pupil*.ti,ab.
87. youngster*.ti,ab.
88. youngster.ti,ab.
89. youngsters.ti,ab.
90. juvenile*.ti,ab.
91. juvenile.ti,ab.
92. juveniles.ti,ab.
93. Infant*.ti,ab.
94. infant.ti,ab.
95. infants.ti,ab.
96. young adj1 adult*.ti,ab.
97. OR/54-96
98. 8 and 53
99. 97 and 98

100. exp juvenile delinquency/
101. (juvenile adj1 delinquen*).mp.
102. school violence/
103. OR/100-102
104. 8 and 103

<table>
<thead>
<tr>
<th>Ovid MEDLINE(R) In-Process &amp; Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present Ovid MEDLINE(R) In-Process &amp; Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present</th>
<th>1. Developing Countries.sh.</th>
<th>11842</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. (Africa or Central Africa or Latin America or Caribbean or West Indies or Eastern Europe or Soviet or South America or Arab or Middle East or Latin America or Central America),hf,kf,ti,ab,cp.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. (Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Uruguay or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kajak or Kenya or Kiribati or Korea or Kosova or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizstann or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mal or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldovia or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanmar or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philippines or Phillipines or Phillipines or Poland or Portugal or Puerto Rico or Romania or Rumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lueca or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadjikistan or Tadzhik or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Viet Nam or Viet Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia).hf,kf,ti,ab,cp.</td>
<td>11842</td>
</tr>
<tr>
<td></td>
<td>4. ((developing or less* developed or under developed or underdeveloped or middle income or low* income or underserved or under served or deprived or poor* or foreign) adj (countr* or nation? or population? or world or region*)).ti,ab.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. ((developing or less* developed or under developed or underdeveloped or middle income or low* income) adj (economy or economies)).ti,ab.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. (Imic or Imics or third world or lami countr*).ti,ab.</td>
<td></td>
</tr>
</tbody>
</table>
transitional countr*.ti,ab.
or/1-8
juvenile delinquency.sh.
(juvenile adj1 delinquen*).mp.
"Child Behavior Disorders".sh.
(school adj1 violence).mp.
(childhood adj1 externalizing adj1 behavio?r).mp.
or/9-13
8 and 14
Social Behavior Disorders.sh.
conduct disorder.sh.
(conduct adj1 disorder*).mp.
aggression.sh.
aggress*.mp.
(acting adj1 out).mp.
(aggressive adj1 behavio?r).mp.
(behavio?r* adj1 problem*).mp.
(behavio?r* adj1 disorder*).mp.
(conduct adj1 problem*).mp.
(conduct adj1 disorder*).mp.
(impulse adj1 control adj1 disorder*).mp.
(antisocial adj1 behavio?r*).mp.
(anti-social adj1 behavio?r*).mp.
(oppositional adj1 defiant adj1 disorder*).af.
(disruptive adj1 behavio?r adj1 disorder*).af.
violent*.mp.
(violent adj1 crime*).mp.
exp crime/
crime.mp.
crimes.mp.
criminal*.mp.
(criminal behavio?r*).mp.
bully*.mp
bullying.sh.
gang.mp.
gangs.mp.
homicid*.mp.
homicide.sh.
(externalizing adj1 behavio?r adj1 problem*).mp.
externalizing.mp.
externalising.mp.
externalized.mp.
externalised.mp.
externaliz*.mp.
externalis*.mp.
(externalizing adj1 behavio?r).mp.
or/16-52
exp child/
"Child Health Services".sh.
"Child Behavior".sh.
58. "Child Care".sh.
60. Infant.sh.
61. baby.ti,ab.
62. babies.ti,ab.
63. toddler.ti,ab.
64. toddlers.ti,ab.
65. adolescent*.ti,ab.
66. adolescent.ti,ab.
67. adolescents.ti,ab.
68. adolescence.ti,ab.
69. child*.ti,ab.
70. child.ti,ab.
71. children*.ti,ab.
72. childhood*.ti,ab.
73. childhood.ti,ab.
74. youth*.ti,ab.
75. youth.ti,ab.
76. youths.ti,ab.
77. student*.ti,ab.
78. student.ti,ab.
79. students.ti,ab.
80. teen*.ti,ab.
81. teenager.ti,ab.
82. teenagers.ti,ab.
83. boy.ti,ab.
84. boys.ti,ab.
85. girl.ti,ab.
86. girls.ti,ab.
87. pupil.ti,ab.
88. pupils.ti,ab.
89. pupil*.ti,ab.
90. youngster*.ti,ab.
91. youngster.ti,ab.
92. youngsters.ti,ab.
93. juvenile*.ti,ab.
94. juvenile.ti,ab.
95. juveniles.ti,ab.
96. infant*.ti,ab.
97. infant.ti,ab.
98. infants.ti,ab.
99. (young adj1 adult*).ti,ab.
100. or/54-99
101.8 and 53 and 100

EMBASE (Ovid)
1974 to 2013
Using Emtree

1. Exp developing country/
2. (Developing adj1 Countr*).hw,ti,ab,cp.
3. (Africa or Central Africa or Latin America or Caribbean or West Indies or Eastern Europe or Soviet or South America or Arab or Middle East or Latin America or Central America).hw,ti,ab,cp.
4. (Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria

124
or Burkina Faso or Burkina Fass or Upper Volta or Burundi or Urund or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroon or Cameroon or Cameroon or Camoros or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoros Island or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guernsey or Guam or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizistan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Maldives or Malaysia or Mauritania or Mauritius or Mayotte or Mexico or Micronesia or Middle East or Moldova or Moldavia or Moldovan or Mongolia or Montenegro or Morocco or Mozambique or Myanmar or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman Muscat or Pakistan or Palau or Palestine or Paraguay or Peru or Philippines or Philippine or Philipines or Poland or Portugal or Puerto Rico or Romania or Rumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Sao Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Seylon or Solomon Islands or Somalia or Southern Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadzhikistan or Tadjikistan or Tadjikistan or Tadzhik or Tanzania or Thailand or Togo or Togoles Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia).hw,ti,ab,cp.
5. ((developing or less* developed or under developed or underdeveloped or middle income or low* income or underserved or under served or deprived or poor* or foreign) adj1 (countr* or nation? or population? or world or region*)).ti,ab.
6. ((developing or less* developed or under developed or underdeveloped or middle income or low* income) adj1 (economy or economies)).ti,ab.
7. (low adj3 middle adj1 countr*).ti,ab.
8. (lamic or lamic third world or lamic countr*).ti,ab.
9. (transitional countr*).ti,ab.
10. or/1-9
11. exp delinquency/
12. (juvenile adj1 delinquen*).mp.
13. (school adj1 violence).mp.
14. or/11-13
15. (conduct adj1 problem*).mp.
16. (conduct adj1 disorder*).mp.
17. (behaviorr adj1 problem*).mp.
18. (behaviorr adj1 disorder*).mp.
19. (oppositional adj1 defiant adj1 disorder*).af.
20. (disruptive adj1 behaviorr adj1 disorder*).af.
21. (impulse adj1 control adj1 disorder*).mp.
22. (criminal adj1 behavio?r*).mp.
23. (violent adj1 crime*).mp.
24. homicid*.mp.
25. homicide.mp.
26. homicides.mp.
27. conduct disorder/
28. aggression.mp.
29. aggressive.mp.
30. aggress*.mp.
31. violen*.mp.
32. violent.mp.
33. violence.mp.
34. crime.mp.
35. crimes.mp
36. criminal*.mp.
37. gang.mp.
38. gangs.mp.
39. bully*.mp.
40. bully.mp.
41. bullying.mp.
42. (aggressive adj1 behavio?r).mp.
43. (antisocial adj1 behavio?r).mp.
44. (anti-social adj1 behavio?r*).mp.
45. exp aggression/
46. homicide/
47. gang/
48. crime/
49. criminal behavior/
50. abnormal behavior/
51. behavior disorder/
52. disruptive behaviour/
53. criminology/
54. homicide/
55. acting out/
56. violence/
57. workplace violence/
58. impulse control disorder/
59. oppositional defiant disorder/
60. conduct disorder/
61. (externalizing adj1 behavio?r adj1 problem*).mp.
63. (externalising adj1 behavio?r).mp.
64. externalizing.mp.
65. externalising.mp.
66. externalized.mp.
67. externalised.mp.
68. externaliz*.mp.
69. externalis*.mp.
70. or/15-69
71. exp child/
72. adolescent.sh.
73. Infant.sh.
74. baby.ti,ab.
75. babies.ti,ab.
76. toddler.ti,ab.
77. toddlers.ti,ab.
78. adolescent*.ti,ab.
79. adolescent.ti,ab.
80. adolescents.ti,ab.
81. adolescence.ti,ab.
82. child*.ti,ab.
83. child.ti,ab.
84. children*.ti,ab.
85. childhood*.ti,ab.
86. childhood.ti,ab.
87. youth*.ti,ab.
88. youth.ti,ab.
89. youths.ti,ab.
90. student*.ti,ab.
91. students.ti,ab.
92. student.ti,ab.
93. teen*.ti,ab.
94. teenager.ti,ab.
95. teenagers.ti,ab.
96. boy.ti,ab.
97. boys.ti,ab.
98. girl.ti,ab.
99. girls.ti,ab.
100. pupil.ti,ab.
101. pupils.ti,ab.
102. pupil*.ti,ab.
103. youngster*.ti,ab.
104. youngster.ti,ab.
105. youngsters.ti,ab.
106. juvenile*.ti,ab.
107. juvenile.ti,ab.
108. juveniles.ti,ab.
110. infant.ti,ab.
111. infants.ti,ab.
112. (young adj1 adult*).ti,ab.
113. or/71-112
114. 10 and 70
115. 113 and 114

CINAHL (EBSCO) 1. TI (“developing country” or “developing countries” or “developing nation” or “developing 3052 nations” or less* W1 “developed country” or less* W1 “developed countries” or less* W1 “developed nation” or less* W1 “developed nations” or “third world” or “under developed” or “middle income” or “low income” or “underserved country” or “underserved countries” or “underserved nation” or “underserved nations” or “under served country” or “under served nations” or “under served countries” or “under served nation” or “under served populations” or “deprived country” or “deprived countries” or “deprived nations” or poor* W1 country or poor* W1 countries or poor* W1 nation* or poor* W1 population* or lmic or lmics)
2. AB ("developing country" or "developing countries" or "developing nation" or "developing nations" or less* W1 "developed country" or less* W1 "developed countries" or less* W1 "developed nation" or less* W1 "developed nations" or "third world" or "under developed" or "middle income" or "low income" or "underserved country" or "underserved countries" or "underserved nation" or "underserved nations" or "under served country" or "under served countries" or "under served nation" or "under served nations" or "underserved population" or "underserved populations" or "under served population" or "under served populations" or "deprived country" or "deprived countries" or "deprived nation" or "deprived nations" or poor* W1 country or poor* W1 countries or poor* W1 nation* or poor* W1 population* or lmic or lmics)

3. MW (Afghanistan or Bangladesh or Benin or “Burkina Faso” or Burundi or Cambodia or “Central African Republic” or Chad or Comoros or Congo or “Cote d’Ivoire” or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or “Salomon Islands” or “Sao Tome” or Senegal or “Sierra Leone” or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or “Viet Nam” or Yemen or Zambia or Zimbabwe)

4. TI (Afghanistan or Bangladesh or Benin or “Burkina Faso” or Burundi or Cambodia or “Central African Republic” or Chad or Comoros or Congo or “Cote d’Ivoire” or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or “Salomon Islands” or “Sao Tome” or Senegal or “Sierra Leone” or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or “Viet Nam” or Yemen or Zambia or Zimbabwe)

5. AB (Afghanistan or Bangladesh or Benin or “Burkina Faso” or Burundi or Cambodia or “Central African Republic” or Chad or Comoros or Congo or “Cote d’Ivoire” or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or “Salomon Islands” or “Sao Tome” or Senegal or “Sierra Leone” or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or “Viet Nam” or Yemen or Zambia or Zimbabwe)

6. MW (Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or “Cape Verde” or Cameroon or China or Colombia or Congo or Cuba or Djibouti or “Dominican Republic” or Ecuador or Egypt or “El Salvador” or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or “Indian Ocean Islands” or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or “Marshall Islands” or Micronesia or “Middle East” or Moldova or Morocco or Namibia or Nicaragua or Palestinian* or Paraguay or Peru or Philippines or Samoa or “Sri Lanka” or Suriname or Swaziland or Syria or “Syrian Arab Republic” or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or “West Bank”) or TI (Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or “Cape Verde” or Cameroon or China or Colombia or Congo or Cuba or Djibouti or “Dominican Republic” or Ecuador or Egypt or “El Salvador” or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or “Indian Ocean Islands” or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or “Marshall Islands” or Micronesia or “Middle East” or Moldova or Morocco or Namibia or Nicaragua or Palestinian* or Paraguay or Peru or Philippines or Samoa or “Sri Lanka” or Suriname or Swaziland or Syria
or “Syrian Arab Republic” or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or “West Bank” Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or “Cape Verde” or Cameroon or China or Colombia or Congo or Cuba or Djibouti or “Dominican Republic” or Ecuador or Egypt or “El Salvador” or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or “Indian Ocean Islands” or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or “Marshall Islands” or Micronesia or “Middle East” or Moldova or Morocco or Namibia or Nicaragua or Palestine* or Paraguay or Peru or Philippines or Samoa or “Sri Lanka” or Suriname or Swaziland or Syria or “Syrian Arab Republic” or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or “West Bank”)

7. AB (Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or “Cape Verde” or Cameroon or China or Colombia or Congo or Cuba or Djibouti or “Dominican Republic” or Ecuador or Egypt or “El Salvador” or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or “Indian Ocean Islands” or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or “Marshall Islands” or Micronesia or “Middle East” or Moldova or Morocco or Namibia or Nicaragua or Palestine* or Paraguay or Peru or Philippines or Samoa or “Sri Lanka” or Suriname or Swaziland or Syria or “Syrian Arab Republic” or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or “West Bank”)

8. MW (“American Samoa” or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or Comoros or “Costa Rica” or Croatia or Dominica or Guinea or Gabon or Grenada or Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Liberia or Libya or Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or Nevis or “Northern Mariana Islands” or Oman or Palau or Panama or Poland or Romania or Russia or “Russian Federation” or Samoa or “Saint Lucia” or “St Lucia” or “Saint Kitts” or “St Kitts” or “Saint Vincent” or “St Vincent” or Serbia or Seychelles or Slovakia or “Slovak Republic” or “South Africa” or Turkey or Uruguay or Venezuela or Yugoslavia

9. TI (“American Samoa” or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or Comoros or “Costa Rica” or Croatia or Dominica or Guinea or Gabon or Grenada or Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Liberia or Libya or Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or Nevis or “Northern Mariana Islands” or Oman or Palau or Panama or Poland or Romania or Russia or “Russian Federation” or Samoa or “Saint Lucia” or “St Lucia” or “Saint Kitts” or “St Kitts” or “Saint Vincent” or “St Vincent” or Serbia or Seychelles or Slovakia or “Slovak Republic” or “South Africa” or Turkey or Uruguay or Venezuela or Yugoslavia

10.AB (“American Samoa” or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or Comoros or “Costa Rica” or Croatia or Dominica or Guinea or Gabon or Grenada or Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Liberia or Libya or Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or Nevis or “Northern Mariana Islands” or Oman or Palau or Panama or Poland or Romania or Russia or “Russian Federation” or Samoa or “Saint Lucia” or “St Lucia” or “Saint Kitts” or “St Kitts” or “Saint Vincent” or “St Vincent” or Serbia or Seychelles or Slovakia or “Slovak Republic” or “South Africa” or Turkey or Uruguay or Venezuela or Yugoslavia

11.TI (Africa or Asia or “South America” or “Latin America” or “Central America”)

12.AB (Africa or Asia or “South America” or “Latin America” or “Central America”)

13.(MH “Asia+”)

14.(MH “West Indies+”)
15. (MH "South America+")
16. (MH "Latin America")
17. (MH "Central America+")
18. (MH "Africa+")
19. (MH "Developing Countries")
20. or/1-19
21. (MH "Juvenile Delinquency")
22. AB (juvenile N1 delinquen*)
23. AB (school N1 violence)
24. (MH "Juvenile Offenders+")
25. (MH "Child Behavior Disorders")
26. or/21-25
27. 20 and 26
28. (MH "Aggression")
29. (MH "Social Behavior Disorders")
30. (MH "Crime")
31. (MH "Violence")
32. (MH "Homicide")
33. (MH "Assault and Battery")
34. (MH "Aggression+")
35. AB (conduct N1 problem*)
36. AB (behaivio#r N1 problem*)
37. AB (antisocial N1 behavio#r)
38. AB (disruptive N1 behavio#r)
39. AB (conduct N1 disorder*)
40. AB (behaivio#r N1 disorder*)
41. AB (aggressive N1 behavio#r)
42. AB (agression)
43. AB (aggressive)
44. AB (antisocial N1 behavio#r)
45. AB (anti-social N1 behavio#r)
46. AB (gang)
47. AB (gangs)
48. AB (criminal N1 behavio#r)
49. AB (violent N1 crime)
50. AB (homicid*)
51. AB (violence)
52. AB (violent)
53. AB (crime)
54. AB (crimes)
55. AB (criminal*)
56. AB (bully)
57. AB (bullying)
58. AB (delinquent*)
60. AB (delinquenc*)
61. TX (oppositional N1 defiant N1 disorder*)
62. TX (disruptive N1 behavio#r N1 disorder*)
63. AB (externalizing N1 behavio#r N1 problem*)
64. AB (externalizing)
65. AB (externalising)
66. AB (externalized)
67. AB (externalised)
68. AB (externaliz*)
69. AB (externalis*)
70. AB (externalizing N1 behavior)
71. AB (externalising N1 behavior)
72. or /28-71
73. 20 AND 72

74. (MH "Child+)
75. (MH "Adolescence")
76. AB (Adolescence*)
77. AB (Adolescence)
78. AB (Adolescent)
79. AB (adolescents)
80. AB (Child*)
81. AB (child)
82. AB (children)
83. AB (childhood)
84. AB (youth*)
85. AB (youth)
86. AB (youths)
87. AB (student*)
88. AB (Students)
89. AB (Student)
90. AB (teen*)
91. AB (teenager)
92. AB (teenagers)
93. AB (boy*)
94. AB (boy)
95. AB (boys)
96. AB (girl*)
97. AB (girl)
98. AB (girls)
99. AB (pupil)
100. AB (pupils)
101. AB (pupil*)
102. AB (youngster*)
103. AB (youngster)
104. AB (youngsters)
105. AB (juvenile*)
106. AB (juvenile)
107. AB (juveniles)
108. AB (young N1 adult*)
109. AB (infant*)
110. AB (infants)
111. AB (infant)
112. AB (baby*)
113. AB (baby)
114. AB (babies)
115. AB (toddler)
116. AB (toddler*)
117. AB (toddlers)
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>TI (&quot;developing country&quot; or &quot;developing countries&quot; or &quot;developing nation&quot; or &quot;developing nations&quot; or less* W1 &quot;developed country&quot; or less* W1 &quot;developed countries&quot; or less* W1 &quot;developed nation&quot; or less* W1 &quot;developed nations&quot; or &quot;third world&quot; or &quot;under developed&quot; or &quot;middle income&quot; or &quot;low income&quot; or &quot;underserved country&quot; or &quot;underserved countries&quot; or &quot;underserved nation&quot; or &quot;underserved nations&quot; or &quot;under served country&quot; or &quot;under served nations&quot; or &quot;underserved population&quot; or &quot;under served population&quot; or &quot;poor* W1 country or poor* W1 countries or poor* W1 population* or lmic or lmics)</td>
</tr>
<tr>
<td>2.</td>
<td>AB (&quot;developing country&quot; or &quot;developing countries&quot; or &quot;developing nation&quot; or &quot;developing nations&quot; or less* W1 &quot;developed country&quot; or less* W1 &quot;developed countries&quot; or less* W1 &quot;developed nation&quot; or less* W1 &quot;developed nations&quot; or &quot;third world&quot; or &quot;under developed&quot; or &quot;middle income&quot; or &quot;low income&quot; or &quot;underserved country&quot; or &quot;underserved countries&quot; or &quot;underserved nation&quot; or &quot;underserved nations&quot; or &quot;under served country&quot; or &quot;under served nations&quot; or &quot;underserved population&quot; or &quot;under served population&quot; or &quot;poor* W1 country or poor* W1 countries or poor* W1 population* or lmic or lmics)</td>
</tr>
<tr>
<td>3.</td>
<td>MW (Afghanistan or Bangladesh or Benin or “Burkina Faso” or Burundi or Cambodia or “Central African Republic” or Chad or Comoros or Congo or “Cote d’Ivoire” or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or “Salomon Islands” or “Sao Tome” or Senegal or “Sierra Leone” or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or “Viet Nam” or Yemen or Zambia or Zimbabwe)</td>
</tr>
<tr>
<td>4.</td>
<td>TI (Afghanistan or Bangladesh or Benin or “Burkina Faso” or Burundi or Cambodia or “Central African Republic” or Chad or Comoros or Congo or “Cote d’Ivoire” or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or “Salomon Islands” or “Sao Tome” or Senegal or “Sierra Leone” or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or “Viet Nam” or Yemen or Zambia or Zimbabwe)</td>
</tr>
<tr>
<td>5.</td>
<td>AB (Afghanistan or Bangladesh or Benin or “Burkina Faso” or Burundi or Cambodia or “Central African Republic” or Chad or Comoros or Congo or “Cote d’Ivoire” or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia)</td>
</tr>
</tbody>
</table>
or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or
“Salomon Islands” or “Sao Tome” or Senegal or “Sierra Leone” or Somalia or Sudan or
Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or “Viet Nam” or
Yemen or Zambia or Zimbabwe

6. MW (Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or
Bosnia or Herzegovina or “Cape Verde” or Cameroon or China or Colombia or Congo or Cuba or
Djibouti or “Dominican Republic” or Ecuador or Egypt or “El Salvador” or Fiji or Gaza or
Georgia or Guam or Guatemala or Guyana or Honduras or “Indian Ocean Islands” or Indonesia or
Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or
“Marshall Islands” or Micronesia or “Middle East” or Moldova or Morocco or Namibia or
Nicaragua or Palau* or Paraguay or Peru or Philippines or Samoa or “Sri Lanka” or
Suriname or Swaziland or Syria or “Syrian Arab Republic” or Thailand or Tonga or Tunisia or
Turkmenistan or Ukraine or Vanuatu or “West Bank” ) or TI ( Albania or Algeria or Angola or
Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or “Cape
Verde” or Cameroon or China or Colombia or Congo or Cuba or Djibouti or “Dominican
Republic” or Ecuador or Egypt or “El Salvador” or Fiji or Gaza or Georgia or Guam or
Guatemala or Guyana or Honduras or “Indian Ocean Islands” or Indonesia or Iran or Iraq or
Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or “Marshall Islands” or
Micronesia or “Middle East” or Moldova or Morocco or Namibia or Nicaragua or Palau* or
Paraguay or Peru or Philippines or Samoa or “Sri Lanka” or Suriname or Swaziland or Syria
or “Syrian Arab Republic” or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or
Vanuatu or “West Bank” Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or
Bhutan or Bolivia or Bosnia or Herzegovina or “Cape Verde” or Cameroon or China or
Colombia or Congo or Cuba or Djibouti or “Dominican Republic” or Ecuador or Egypt or “El
Salvador” or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or “Indian
Ocean Islands” or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or
Macedonia or Maldives or “Marshall Islands” or Micronesia or “Middle East” or Moldova or
Morocco or Namibia or Nicaragua or Palau* or Paraguay or Peru or Philippines or Samoa or
“Sri Lanka” or Suriname or Swaziland or Syria or “Syrian Arab Republic” or Thailand or
Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or “West Bank”)

7. AB (Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or
Bosnia or Herzegovina or “Cape Verde” or Cameroon or China or Colombia or Congo or Cuba or
Djibouti or “Dominican Republic” or Ecuador or Egypt or “El Salvador” or Fiji or Gaza or
Georgia or Guam or Guatemala or Guyana or Honduras or “Indian Ocean Islands” or Indonesia or
Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or
“Marshall Islands” or Micronesia or “Middle East” or Moldova or Morocco or Namibia or
Nicaragua or Palau* or Paraguay or Peru or Philippines or Samoa or “Sri Lanka” or
Suriname or Swaziland or Syria or “Syrian Arab Republic” or Thailand or Tonga or Tunisia or
Turkmenistan or Ukraine or Vanuatu or “West Bank”)

8. MW (“American Samoa” or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or
Comoros or “Costa Rica” or Croatia or Dominica or Guinea or Gabon or Grenada or
Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Liberia or Libyan or Libya or
Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or
Nevis or “Northern Mariana Islands” or Oman or Palau or Panama or Poland or Romania or
Russia or “Russian Federation” or Samoa or “Saint Lucia” or “St Lucia” or “Saint Kitts” or “St Kitts” or
“Saint Vincent” or “St Vincent” or Serbia or Seychelles or Slovakia or “Slovak Republic” or
“South Africa” or Turkey or Uruguay or Venezuela or Yugoslavia)

9. TI (“American Samoa” or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or
Comoros or “Costa Rica” or Croatia or Dominica or Guinea or Gabon or Grenada or
Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Liberia or Libyan or Libya or
Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or Nevis or “Northern Mariana Islands” or Oman or Palau or Panama or Poland or Romania or Russia or “Russian Federation” or Samoa or “Saint Lucia” or “St Lucia” or “Saint Kitts” or “St Kitts” or “Saint Vincent” or “St Vincent” or Serbia or Seychelles or Slovakia or “Slovak Republic” or “South Africa” or Turkey or Uruguay or Venezuela or Yugoslavia

10. AB (“American Samoa” or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or Comoros or “Costa Rica” or Croatia or Dominica or Guinea or Gabon or Grenada or Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Libya or Libya or Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or Nevis or “Northern Mariana Islands” or Oman or Palau or Panama or Poland or Romania or Russia or “Russian Federation” or Samoa or “Saint Lucia” or “St Lucia” or “Saint Kitts” or “St Kitts” or “Saint Vincent” or “St Vincent” or Serbia or Seychelles or Slovakia or “Slovak Republic” or “South Africa” or Turkey or Uruguay or Venezuela or Yugoslavia)

11. TI (Africa or Asia or “South America” or “Latin America” or “Central America”)

12. AB (Africa or Asia or “South America” or “Latin America” or “Central America”)

13. (MH “Asia+”)

14. (MH “West Indies+”)

15. (MH “South America+”)

16. (MH “Latin America”)

17. (MH “Central America+”)

18. (MH “Africa+”)

19. (MH “Developing Countries”)

20. or/1-19

21. (MH “Juvenile Delinquency”)

22. AB (juvenile N1 delinquen*)

23. AB (school N1 violence)

24. (MH “Juvenile Offenders+”)

25. (MH “Child Behavior Disorders”)

26. or/21-25

27. 20 AND 26

28. (MH ”Aggression”)

29. (MH ”Social Behavior Disorders”)

30. (MH ”Crime”)

31. (MH ”Violence”)

32. (MH ”Homicide”)

33. (MH ”Assault and Battery”)

34. (MH ”Aggression+”)

35. AB (conduct N1 problem*)

36. AB (behavior N1 problem*)

37. AB (disruptive N1 behavior#)

38. AB (conduct N1 disorder*)
39. AB (behavior N1 disorder*)
40. AB (aggressive N1 behavior)
41. AB (aggression)
42. AB (aggressive)
43. AB (antisocial N1 behavior)
44. AB (anti-social N1 behavior)
45. AB (gang)
46. AB (gangs)
47. AB (criminal N1 behavior)
48. AB (violent N1 crime)
49. AB (homicid*)
50. AB (violence)
51. AB (violent)
52. AB (crime)
53. AB (crimes)
54. AB (criminal*)
55. AB (bully)
56. AB (bullying)
57. AB (delinquent*)

59. AB (delinquenc*)
60. TX (oppositional N1 defiant N1 disorder*)
61. TX (disruptive N1 behavior N1 disorder*)
62. AB (externalizing N1 behavior N1 problem*)
63. AB (externalizing)
64. AB (externalising)
65. AB (externalized)
66. AB (externalised)
67. AB (externaliz*)
68. AB (externalis*)
69. AB (externalizing N1 behavior)
70. AB (externalising N1 behavior)
71. or /28-70
72. 20 AND 71

73. (MH "Child+")
74. (MH "Adolescence")
75. AB (Adolescen*)
76. AB (Adolescence)
77. AB (Adolescent)
78. AB (adolescents)
79. AB (Child*)
80. AB (child)
81. AB (children)
82. AB (childhood)
83. AB (youth*)
84. AB (youth)
85. AB (youths)
86. AB (students*)
87. AB (Students)
88. AB (Student)
89. AB (teen*)
90. AB (teenager)
91. AB (teenagers)
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>92.</td>
<td>AB (boy*)</td>
</tr>
<tr>
<td>93.</td>
<td>AB (boy)</td>
</tr>
<tr>
<td>94.</td>
<td>AB (boys)</td>
</tr>
<tr>
<td>95.</td>
<td>AB (girl*)</td>
</tr>
<tr>
<td>96.</td>
<td>AB (girl)</td>
</tr>
<tr>
<td>97.</td>
<td>AB (girls)</td>
</tr>
<tr>
<td>98.</td>
<td>AB (pupil)</td>
</tr>
<tr>
<td>99.</td>
<td>AB (pupils)</td>
</tr>
<tr>
<td>100.</td>
<td>AB (pupil*)</td>
</tr>
<tr>
<td>101.</td>
<td>AB (youngster*)</td>
</tr>
<tr>
<td>102.</td>
<td>AB (youngster)</td>
</tr>
<tr>
<td>103.</td>
<td>AB (youngsters)</td>
</tr>
<tr>
<td>104.</td>
<td>AB (juvenile*)</td>
</tr>
<tr>
<td>105.</td>
<td>AB (juvenile)</td>
</tr>
<tr>
<td>106.</td>
<td>AB (juveniles)</td>
</tr>
<tr>
<td>107.</td>
<td>AB (young N1 adult*)</td>
</tr>
<tr>
<td>108.</td>
<td>AB (infant*)</td>
</tr>
<tr>
<td>109.</td>
<td>AB (infants)</td>
</tr>
<tr>
<td>110.</td>
<td>AB (infant)</td>
</tr>
<tr>
<td>111.</td>
<td>AB (baby*)</td>
</tr>
<tr>
<td>112.</td>
<td>AB (baby)</td>
</tr>
<tr>
<td>113.</td>
<td>AB (babies)</td>
</tr>
<tr>
<td>114.</td>
<td>AB (toddler)</td>
</tr>
<tr>
<td>115.</td>
<td>AB (toddler*)</td>
</tr>
<tr>
<td>116.</td>
<td>AB (toddlers)</td>
</tr>
<tr>
<td>117.</td>
<td>or/73-116</td>
</tr>
<tr>
<td>118.</td>
<td>20 and 117</td>
</tr>
</tbody>
</table>

**EconLit** (EBSCOHost)

1. TI (“developing country” or “developing countries” or “developing nation” or “developing nations” or less* W1 “developed country” or less* W1 “developed countries” or less* W1 “developed nation” or less* W1 “developed nations” or “third world” or “under developed” or “middle income” or “low income” or “underserved country” or “underserved countries” or “underserved nation” or “underserved nations” or “under served country” or “under served nations” or “underserved populations” or “under served population” or “under served populations” or “deprived country” or “deprived countries” or “deprived nation” or “deprived nations” or poor* W1 country or poor* W1 countries or poor* W1 nation* or poor* W1 population* or lmic or lmics)

2. AB (“developing country” or “developing countries” or “developing nation” or “developing nations” or less* W1 “developed country” or less* W1 “developed countries” or less* W1 “developed nation” or less* W1 “developed nations” or “third world” or “under developed” or “middle income” or “low income” or “underserved country” or “underserved countries” or “underserved nation” or “underserved nations” or “under served country” or “under served nations” or “underserved populations” or “under served population” or “under served populations” or “deprived country” or “deprived countries” or “deprived nation” or “deprived nations” or poor*)
W1 country or poor* W1 countries or poor* W1 nation* or poor* W1 population* or lmic or lmics)

3. MW (Afghanistan or Bangladesh or Benin or “Burkina Faso” or Burundi or Cambodia or “Central African Republic” or Chad or Comoros or Congo or “Cote d’Ivoire” or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or “Salomon Islands” or “Sao Tome” or Senegal or “Sierra Leone” or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or “Viet Nam” or Yemen or Zambia or Zimbabwe)

4. TI (Afghanistan or Bangladesh or Benin or “Burkina Faso” or Burundi or Cambodia or “Central African Republic” or Chad or Comoros or Congo or “Cote d’Ivoire” or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or “Salomon Islands” or “Sao Tome” or Senegal or “Sierra Leone” or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or “Viet Nam” or Yemen or Zambia or Zimbabwe)

5. AB (Afghanistan or Bangladesh or Benin or “Burkina Faso” or Burundi or Cambodia or “Central African Republic” or Chad or Comoros or Congo or “Cote d’Ivoire” or Eritrea or Ethiopia or Gambia or Ghana or Guinea or Haiti or India or Kenya or Korea or Kyrgyz or Kyrgyzstan or Lao or Laos or Liberia or Madagascar or Malawi or Mali or Mauritania or Melanesia or Mongolia or Mozambique or Burma or Myanmar or Nepal or Niger or Nigeria or Pakistan or Rwanda or “Salomon Islands” or “Sao Tome” or Senegal or “Sierra Leone” or Somalia or Sudan or Tajikistan or Tanzania or Timor or Togo or Uganda or Uzbekistan or Vietnam or “Viet Nam” or Yemen or Zambia or Zimbabwe)

6. MW (Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or “Cape Verde” or Cameroon or China or Colombia or Congo or Cuba or Djibouti or “Dominican Republic” or Ecuador or Egypt or “El Salvador” or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or “Indian Ocean Islands” or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or “Marshall Islands” or Micronesia or “Middle East” or Moldova or Morocco or Namibia or Nicaragua or Palestine* or Paraguay or Peru or Philippines or Samoa or “Sri Lanka” or Suriname or Swaziland or Syria or “Syrian Arab Republic” or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or “West Bank” ) or TI ( Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or “Cape Verde” or Cameroon or China or Colombia or Congo or Cuba or Djibouti or “Dominican Republic” or Ecuador or Egypt or “El Salvador” or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or “Indian Ocean Islands” or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or “Marshall Islands” or Micronesia or “Middle East” or Moldova or Morocco or Namibia or Nicaragua or Palestine* or Paraguay or Peru or Philippines or Samoa or “Sri Lanka” or Suriname or Swaziland or Syria or “Syrian Arab Republic” or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or “West Bank” Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or “Cape Verde” or Cameroon or China or Colombia or Congo or Cuba or Djibouti or “Dominican Republic” or Ecuador or Egypt or “El Salvador” or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or “Indian Ocean Islands” or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or “Marshall Islands” or Micronesia or “Middle East” or Moldova or Morocco or Namibia or Nicaragua or Palestine* or Paraguay or Peru or Philippines or Samoa or “Sri Lanka” or Suriname or Swaziland or Syria or “Syrian Arab Republic” or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or “West Bank” Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or “Cape Verde” or Cameroon or China or Colombia or Congo or Cuba or Djibouti or “Dominican Republic” or Ecuador or Egypt or “El Salvador” or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or “Indian Ocean Islands” or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or “Marshall Islands” or Micronesia or “Middle East” or Moldova or Morocco or Namibia or Nicaragua or Palestine* or Paraguay or Peru or Philippines or Samoa or “Sri Lanka” or Suriname or Swaziland or Syria or “Syrian Arab Republic” or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or “West Bank”
or “Sri Lanka” or Suriname or Swaziland or Syria or “Syrian Arab Republic” or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or “West Bank”

7. AB (Albania or Algeria or Angola or Armenia or Azerbaijan or Belarus or Bhutan or Bolivia or Bosnia or Herzegovina or “Cape Verde” or Cameroon or China or Colombia or Congo or Cuba or Djibouti or “Dominican Republic” or Ecuador or Egypt or “El Salvador” or Fiji or Gaza or Georgia or Guam or Guatemala or Guyana or Honduras or “Indian Ocean Islands” or Indonesia or Iran or Iraq or Jamaica or Jordan or Kiribati or Lesotho or Macedonia or Maldives or “Marshall Islands” or Micronesia or “Middle East” or Moldova or Morocco or Namibia or Nicaragua or Palest* or Paraguay or Peru or Philippines or Samoa or “Sri Lanka” or Suriname or Swaziland or Syria or “Syrian Arab Republic” or Thailand or Tonga or Tunisia or Turkmenistan or Ukraine or Vanuatu or “West Bank”)

8. MW (“American Samoa” or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or Comoros or “Costa Rica” or Croatia or Dominica or Guinea or Gabon or Grenada or Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Libya or Libyan or Libya or Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or Nevis or “Northern Mariana Islands” or Oman or Palau or Panama or Poland or Romania or Russia or “Russian Federation” or Samoa or “Saint Lucia” or “St Lucia” or “Saint Kitts” or “St Kitts” or “Saint Vincent” or “St Vincent” or Serbia or Seychelles or Slovakia or “Slovak Republic” or “South Africa” or Turkey or Uruguay or Venezuela or Yugoslavia)

9. TI (“American Samoa” or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or Comoros or “Costa Rica” or Croatia or Dominica or Guinea or Gabon or Grenada or Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Libya or Libyan or Libya or Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or Nevis or “Northern Mariana Islands” or Oman or Palau or Panama or Poland or Romania or Russia or “Russian Federation” or Samoa or “Saint Lucia” or “St Lucia” or “Saint Kitts” or “St Kitts” or “Saint Vincent” or “St Vincent” or Serbia or Seychelles or Slovakia or “Slovak Republic” or “South Africa” or Turkey or Uruguay or Venezuela or Yugoslavia)

10. AB (“American Samoa” or Argentina or Belize or Botswana or Brazil or Bulgaria or Chile or Comoros or “Costa Rica” or Croatia or Dominica or Guinea or Gabon or Grenada or Grenadines or Hungary or Kazakhstan or Latvia or Lebanon or Libya or Libyan or Libya or Lithuania or Malaysia or Mauritius or Mayotte or Mexico or Micronesia or Montenegro or Nevis or “Northern Mariana Islands” or Oman or Palau or Panama or Poland or Romania or Russia or “Russian Federation” or Samoa or “Saint Lucia” or “St Lucia” or “Saint Kitts” or “St Kitts” or “Saint Vincent” or “St Vincent” or Serbia or Seychelles or Slovakia or “Slovak Republic” or “South Africa” or Turkey or Uruguay or Venezuela or Yugoslavia)

11. TI (Africa or Asia or “South America” or “Latin America” or “Central America”)

12. AB (Africa or Asia or “South America” or “Latin America” or “Central America”)

13. (SU “Asia+

14. (SU “West Indies+

15. (SU “South America+

16. (SU “Latin America+

17. (SU “Central America+

188
18. (SU "Africa+")

19. (SU “Developing Countries”)

20. or/1-19

21. (SU "Juvenile Delinquency")
22. AB (juvenile N1 delinquen*)
23. AB (school N1 violence)
24. (SU "Juvenile Offenders+")
25. (SU "Child Behavior Disorders")
26. or/21-25
27. 20 and 26

28. SU ("Crime")
29. SU ("Aggression")
30. SU ("Bullying")
31. SU ("Violence")
32. (SU "Violence")
33. (SU "Homicide")
34. AB (conduct N1 problem*)
35. AB (behavior N1 problem*)
36. AB (disruptive N1 behavior*)
37. AB (conduct N1 disorder*)
38. AB (behavior N1 disorder*)
39. AB (aggressive N1 behavior*)
40. AB (aggression)
41. AB (aggressive)
42. AB (antisocial N1 behavior*)
43. AB (anti-social N1 behavior*)
44. AB (gang)
45. AB (gangs)
46. AB (criminal N1 behavior*)
47. AB (violent N1 crime)
48. AB (homicid*)
49. AB (violence)
50. AB (violent)
51. AB (crime)
52. AB (crimes)
53. AB (criminal*)
54. AB (bully)
55. AB (bullying)
56. AB (delinquent*)

58. AB (delinquenc*)
59. TX (oppositional N1 defiant N1 disorder*)
60. TX (disruptive N1 behavior N1 disorder*)
61. AB (externalizing N1 behavior N1 problem*)
62. AB (externalizing)
63. AB (externalising)
64. AB (externalized)
65. AB (externalised)
66. AB (externaliz*)
67. AB (externalis*)
68. AB (externalizing N1 behavior)
69. AB (externalising N1 behavior)
70. or /28-69
71. 20 AND 70

72. (SU "Child")
73. (SU "Adolescence")
74. AB (Adolescence)
75. AB (Adolescent)
76. AB (adolescents)
77. AB (Child*)
78. AB (child)
79. AB (children)
80. AB (childhood)
81. AB (youth*)
82. AB (youth)
83. AB (youths)
84. AB (students)
85. AB (student*)
86. AB (Students)
87. AB (Student)
88. AB (teen*)
89. AB (teenager)
90. AB (teenagers)
91. AB (boy*)
92. AB (boy)
93. AB (boys)
94. AB (girl*)
95. AB (girl)
96. AB (girls)
97. AB (pupil)
98. AB (pupils)
99. AB (pupil*)
100. AB (youngster*)
101. AB (youngster)
102. AB (youngsters)
103. AB (juvenile*)
104. AB (juveniles)
105. AB (infant*)
106. AB (young N1 adult*)
107. AB (infant)
108. AB (infants)
109. AB (infant)
110. AB (baby*)
111. AB (baby)
112. AB (babies)
113. AB (toddler)
114. AB (toddler*)
115. AB (toddlers)
116. or/72-115
117. 20 and 116

Sociological Abstracts 1. ab(Africa or Asia or "Latin America" or "South America" or Caribbean or "West Indies" or "Eastern Europe" or Soviet or Arab or "Middle East" or "Latin America" or "Central America")
OR (ab(Afghanistan or Albania or Algeria or Angola or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameroon or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoro Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldive Islands or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizistan or Kyrgyzstan or Kirghizistan or Kyrghizstan or Kyrgyz Republic or Kirghizia or Kyrgyzstan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldova or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palesie or Palestine or Panama or Paraguay or Peru or Philippines or Philippine Islands or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Seychelles or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Tajikistan or Tadjikistan or Tadzhikistan or Tadjikistan or Tadzhikistan or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmenia or Ukraine or Ukraine or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambian or Zimbabwe or Rhodesia)) OR (AB “Developing Countries”) OR (ab(developing NEAR/1 world)) OR (ab(poor* NEAR/1 nation*)) OR (ab(developing NEAR/1 countr*)) OR (ab(developing NEAR/1 region*)) OR (ab(third NEAR/1 world)) OR SU.EXACT.EXPLODE(“Developing Countries”)

2. AB(delinquent*) OR AB(delinquenc*) OR AB(school NEAR/1 violence) OR AB(juvenile NEAR/1 delinquency) OR AB(juvenile NEAR/1 delinquency) OR AB(juvenile NEAR/1 delinquents) OR SU.exact(“JUVENILE DELINQUENCY”) OR SU.exact(“DELINQUENCY”) OR SU.exact(“JUVENILE OFFENDERS”)

3. 1 and 2

4. (SU.EXACT.EXPLODE(“Crime”)) OR (SU.EXACT.EXPLODE(“Aggression”)) OR (SU.EXACT.EXPLODE(“Behavior Problems”)) OR (SU.EXACT.EXPLODE(“Violence”)) OR (SU.EXACT.EXPLODE(“Gangs”)) OR (ab(gang*)) OR (ab(conduct NEAR/1 problem*)) OR (ab(behavior NEAR/1 problem*)) OR (ab(conduct NEAR/1 disorder*)) OR (ab(antisocial NEAR/1 behavior NEAR/1 problem*)) OR (ab(antisocial NEAR/1 behavior NEAR/1 disorder*)) OR (AB "Aggression") OR (AB "Social Behavior Disorders") OR (AB "Crime") OR (AB "Violence") OR (AB "Homicide") OR (AB "Assault and Battery") OR (AB "Aggression") OR (AB "conduct
NEAR/1 problem*)) OR (AB(behavior NEAR/1 problem*)) OR (AB(disruptive NEAR/1 behavior)) OR (AB(conduct NEAR/1 disorder*)) OR (AB(behavior NEAR/1 disorder*)) OR (AB(antisocial NEAR/1 behavior)) OR (AB(anti-social NEAR/1 behavior)) OR (AB(gang)) OR (AB(gangs)) OR (AB(criminal N1 behavior)) OR (AB(violent NEAR/1 crime)) OR (AB(violence)) OR (AB(violent)) OR (AB(criminal)) OR (AB(bullying)) OR TX (oppositional N1 defiant N1 disorder*) OR TX (disruptive N1 behavior N1 disorder*)

5. (SU.EXACT.EXPLODE("Adolescents")) OR (SU.EXACT.EXPLODE("Infants")) OR (SU.EXACT.EXPLODE("Children")) OR (AB "Adolescence") OR AB(Adolescence) OR AB(Adolescent) OR AB(adolescents) OR AB(Child*) OR AB(child) OR AB(children) OR AB(childhood) OR AB(youth*) OR AB(youth) OR AB(youths) OR AB(student*) OR AB(Students) OR AB(Studend) OR AB(teen*) OR AB(teenager) OR AB(teenagers) OR AB(boy*) OR AB(boy) OR AB(boys) OR AB(girl*) OR AB(girl) OR AB(girls) OR AB(pupil) OR AB(pupils) OR AB(pupil*) OR AB(youngster*) OR AB(youngster) OR AB(youngsters) OR AB(juvenile*) OR AB(juvenile) OR AB(juveniles) OR AB(young NEAR/1 adult*) OR AB(infant*) OR AB(infants) OR AB(infant) OR AB(baby*) OR AB(baby) OR AB(babies) OR AB(toddler) OR AB(toddler*) OR AB(toddlers)

6. 4 and 5

7. 1 and 6

Applied Social Sciences Index and Abstracts (ProQuest)

1. (ab(Africa or Asia or "Latin America" or "South America" or Caribbean or "West Indies" or "Eastern Europe" or Soviet or Arab or "Middle East" or "Latin America" or "Central America"))

801

OR (ab(Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Herzegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameroon or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoro Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somalliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizistan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonina or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldovia or Moldovan or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philippine or Phillipines or Polanidn or Portugal or Puerto Rico or Romania or Rumania or Roumanina or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator...
International Bibliography of the Social Sciences (IBSS) (ProQuest)

1. (ab(Africa or Asia or "Latin America" or "South America" or Caribbean or "West Indies" or "Eastern Europe" or Soviet or Arab or "Middle East" or "Latin America" or "Central America")) OR (ab(Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelorussia or Byelorusso or Belarus or Belorussia or Belarus or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Botswana or Brazil or Bulgaria or Burkina Faso or Burkinabé or Burundi or Upper Volta or Cameroon or Camerun or Cameroon or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or...
Comoro Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or
Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia
or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or
East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El
Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia
or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or
Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or
Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan
or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosov or Kyrgyzstan or Kirghizia
or Kyrgyz Republic or Kirghiz or Kirgizstan or Lao PDR or Laos or Latvia or Lebanon or
Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or
Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or
Nyasaland or Mal or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands
or Mexico or Micronesia or Middle East or Moldova or Moldavia or Moldavian or Mongolia or
Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia
or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or
Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama
or Paraguay or Peru or Philippines or Philipines or Philippine or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or
Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent
or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South
Africa or Sudan or Suriname or Swaziland or Syria or Tajikistan or Tadjikistan or Tadjikistan or
Tadzhikistan or Tadzhikistan or Tanzania or Thailand or Togo or Togolese Republic or Tonga
or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine
or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or
Uzbek or Vanuatu or New Hebrides or Venezuala or Vietnam or Viet Nam or West Bank or
Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia)) OR (AB "Developing Countries")
OR (ab(developing NEAR/1 world)) OR (ab(poor* NEAR/1 nation*)) OR (ab(developing
NEAR/1 region*)) OR (ab(developing NEAR/1 world)) OR (SU.EXACT.EXPLODE("Developing Countries"))

2. (SU.EXACT.EXPLODE("Crime") OR (SU.EXACT.EXPLODE("Aggression") OR (SU.EXACT.EXPLODE("Bullying") OR (SU.EXACT.
"Violence") OR (SU.EXACT.EXPLODE("Gang") OR (SU.EXACT.EXPLODE("Crime") OR (SU.EXACT.EXPLODE("Aggression") OR (SU.EXACT.
EXPLODE("Violence") OR (ab(gang*)) OR (ab(conduct NEAR/1 problem*)) OR (ab(behavio*r NEAR/1 problem*)) OR (ab(conduct NEAR/1 disorder*)) OR (ab(antisocial
NEAR/1 behavio*r*))) OR (ab(oppositional NEAR/1 defiant NEAR/1 disorder*)) OR (AB
"Aggression") OR (AB "Social Behavior Disorders") OR (AB "Crime") OR (AB "Violence") OR
(AB "Homicide") OR (AB "Assault and Battery") OR (AB "Aggression") OR (AB(conduct
NEAR/1 problem*)) OR (AB(behavior# NEAR/1 problem*)) OR (AB(disruptive NEAR/1 behavior#)) OR (AB(conduct NEAR/1 disorder*)) OR (AB(behavior# NEAR/1 disorder*)) OR (AB(antisocial
NEAR/1 behavior#)) OR (AB(antisocial NEAR/1 behavior#)) OR (AB(gang)) OR (AB(gangs)) OR (AB(criminal N1 behavior#)) OR (AB(violent NEAR/1 crime)) OR
(AB(homicide)) OR (AB(violence)) OR (AB(violent)) OR (AB(criminal)) OR (AB(violent)) OR (AB(bullying)) OR (AB(bullying))

3. AB(delinquent*) OR AB(delinquenc*) OR TX (oppositional N1 defiant N1 disorder*) OR TX (disruptive N1 behavior# N1 disorder*) OR AB(school NEAR/1 violence) OR AB(juvenile NEAR/1 delinquency) OR AB(juvenile NEAR/1 delinquent) OR AB(juvenile NEAR/1 delinquents)
4. (SU.EXACT.EXPLODE("Children") OR (SU.EXACT.EXPLODE("Adolescence"))) OR (SU.EXACT.EXPLODE("Youth")) OR (AB "Adolescence") OR AB(Adolescen*) OR AB(Adolescent) OR AB(adolescents) OR AB(Child*) OR AB(child) OR AB(children) OR AB(chilhood) OR AB(youth*) OR AB(youth) OR AB(youths) OR AB(student*) OR AB(Students) OR AB(Student) OR AB(teen*) OR AB(teenager) OR AB(teenagers) OR AB(boy*) OR AB(boy) OR AB(boys) OR AB(girl*) OR AB(girl) OR AB(girls) OR AB(pupil) OR AB(pupils) OR AB(pupil*) OR AB(youngster*) OR AB(youngster) OR AB(youngsters) OR AB(juvenile*) OR AB(juvenile) OR AB(juveniles) OR AB(young NEAR/1 adult*) OR AB(infant*) OR AB(infants) OR AB(infant) OR AB(baby*) OR AB(baby) OR AB(babies) OR AB(toddler) OR AB(toddler*) OR AB(toddlers)

ERIC (ProQuest) 1. (ab(Africa or Asia or "Latin America" or "South America" or Caribbean or "West Indies" or "Eastern Europe" or Soviet or Arab or "Middle East" or "Latin America" or "Central America")) OR (ab(Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelarus or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brazil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Urundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameroon or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoros Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Cotea or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somalland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gaza or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakhstan or Kenya or Kiniati or Kina or Kosovo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgizistan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia or Malaya or Malay or Sabah or Sarawak or Malawi or Nyasaland or Mal or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldavia or Mongolia or Montenegro or Morocco or Ilini or Mozambique or Myanmar or Myanma or Burma or Nambia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philippine or Philippines or Poland or Portugal or Puerto Rico or Romania or Rumania or Rumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Sao Tome or Southern Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Seylons or Solomon Islands or Somalia or South Africa or Sudan or Suriname or Surinam or Swaziland or Syria or Taiwan or Tajikistan or Tadzhikistan or Tadjik or Tadzhikistan or Tadzhik or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Ukraine or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Uzbek or Vanuatu or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Zambia or Zimbabwe or Rhodesia)) OR (AB "Developing Countries") OR (SU.EXACT.EXPLODE("Developing Countries")) OR (ab(developing NEAR/1 world)) OR (ab(poor* NEAR/1 nation*)) OR (ab(developing NEAR/1 countr*)) OR (ab(developing NEAR/1 region*)) OR (ab(third NEAR/1 world)) OR (SU.EXACT.EXPLODE("Foreign Countries")) OR (SU.EXACT.EXPLODE("Developing Nations"))
2. AB(delinquent*) OR AB(delinquenc*) OR TX (oppositional N1 defiant N1 disorder*) OR TX (disruptive N1 behavior N1 disorder*) OR AB(school NEAR/1 violence) OR AB(juvenile NEAR/1 delinquency) OR AB(juvenile NEAR/1 delinquent) OR AB(juvenile NEAR/1 delinquents)

3. 1 and 2

4. (SU.EXACT.EXPLODE("Crime")) OR (SU.EXACT.EXPLODE("Aggression")) OR (SU.EXACT.EXPLODE("Bullying")) OR (SU.EXACT.EXPLODE("Violence")) OR (ab(gang*)) OR (ab(conduct NEAR/1 problem*)) OR (ab(behavior N1 NEAR/1 problem*)) OR (ab(conduct NEAR/1 disorder*)) OR (ab(antisocial NEAR/1 behavior*)) OR (ab(oppositional NEAR/1 defiant NEAR/1 disorder*)) OR (AB "Aggression") OR (AB "Social Behavior Disorders") OR (AB "Crime") OR (AB "Violence") OR (AB "Homicide") OR (AB "Assault and Battery") OR (AB "Aggression") OR (AB(conduct NEAR/1 problem*)) OR (AB(behavior N1 NEAR/1 problem*)) OR (AB(disruptive NEAR/1 behavior*)) OR (AB(conduct NEAR/1 disorder*)) OR (AB(behavior N1 NEAR/1 disorder*)) OR (AB(behavior NEAR/1 disorder*)) OR (AB(school NEAR/1 violence)) OR (AB(juvenile NEAR/1 delinquency)) OR (AB(juvenile NEAR/1 delinquent) OR AB(juvenile NEAR/1 delinquents)

5. (SU.EXACT.EXPLODE("Adolescents")) OR (SU.EXACT.EXPLODE("Early Adolescents")) OR (SU.EXACT.EXPLODE("Children")) OR (SU.EXACT.EXPLODE("Youth")) OR (SU.EXACT.EXPLODE("Late Adolescents")) OR (AB "Adolescence") OR AB(Adolescence) OR AB(Adolescent) OR AB(adolescents) OR AB(Adolescent) OR AB(adolescent) OR AB(child) OR AB(Adolescence) OR AB(Adolescent) OR AB(adolescent) OR AB(adolescents) OR AB(adolescence) OR AB(children) OR AB(childhood) OR AB(youth) OR AB(youths) OR AB(youth*) OR AB(youths) OR AB(Students) OR AB(teacher) OR AB(teenager) OR AB(teenagers) OR AB(boys) OR AB(boy) OR AB(girl) OR AB(girls) OR AB(pupil) OR AB(pupils) OR AB(pupil*) OR AB(younger*) OR AB(younger) OR AB(youngest) OR AB(youngers) OR AB(juvenile) OR AB(juvenile) OR AB(juveniles) OR AB(juvenile NEAR/1 adult*) OR AB(infant) OR AB(infant) OR AB(infants) OR AB(baby) OR AB(babies) OR AB(toddler) OR AB(toddler) OR AB(toddlers)

6. 4 and 5

7. 1 and 6

<table>
<thead>
<tr>
<th>National</th>
<th>Criminal</th>
<th>Justice</th>
<th>Reference</th>
<th>Service</th>
<th>Abstracts</th>
<th>Database</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Developing Countries&quot;</td>
<td>91</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Web of Science</th>
<th>6248</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Topic=(infants)</td>
<td></td>
</tr>
<tr>
<td>2. Topic=(infant)</td>
<td></td>
</tr>
<tr>
<td>3. Topic=(infant*)</td>
<td></td>
</tr>
<tr>
<td>4. Topic=(juveniles)</td>
<td></td>
</tr>
<tr>
<td>5. Topic=(juvenile)</td>
<td></td>
</tr>
<tr>
<td>6. Topic=(juvenile*)</td>
<td></td>
</tr>
<tr>
<td>7. Topic=(younger)</td>
<td></td>
</tr>
<tr>
<td>8. Topic=(younger)</td>
<td></td>
</tr>
<tr>
<td>9. Topic=(younger*)</td>
<td></td>
</tr>
</tbody>
</table>

146
10. Topic=(pupil*)
11. Topic=(pupils)
12. Topic=(pupil)
13. Topic=(girls)
14. Topic=(girl)
15. Topic=(boys)
16. Topic=(boy)
17. Topic=(teenagers)
18. Topic=(teenager)
19. Topic=(teen*)
20. Topic=(students)
21. Topic=(student)
22. Topic=(student*)
23. Topic=(youths)
24. Topic=(youth)
25. Topic=(youth*)
26. Topic=(childhood)
27. Topic=(childhood*)
28. Topic=(children*)
29. Topic=(child)
30. Topic=(child*)
31. Topic=(adolescence)
32. Topic=(adolescents)
33. Topic=(adolescent)
34. Topic=(adolescen*)
35. Topic=(toddlers)
36. Topic=(toddler)
37. Topic=(babies)
38. Topic=(baby)
39. Topic=(young NEAR/1 adult*)
40. Or/1-39

41. Topic=(externalis*)
42. Topic=(externaliz*)
43. Topic=(externalised)
44. Topic=(externalized)
45. Topic=(externalising)
46. Topic=(externalizing)
47. Topic=(bully)
48. Topic=(bullying)
49. Topic=(bully*)
50. Topic=(criminal NEAR/1 behavio$r*)
51. Topic=(criminal*)
52. Topic=(crimes)
53. Topic=(crime)
54. Topic=(violent NEAR/1 crime*)
55. Topic=(aggressive NEAR/1 behavio$r*)
56. Topic=(anti-social)
57. Topic=(antisocial)
58. Topic=(aggressive)
59. Topic=(agress*)
60. Topic=(aggression)
61. Topic=(antisocial NEAR/1 behavio$r*)
62. Topic=(disruptive NEAR/1 behavior NEAR/1 disorder*)
63. Topic=(oppositional NEAR/1 behavior NEAR/1 disorder*)
64. Topic=(behavior NEAR/1 disorder*)
65. Topic=(behavior NEAR/1 problem*)
66. Topic=(conduct NEAR/1 disorder*)
67. Topic=(conduct NEAR/1 problem*)
68. Topic=(gangs)
69. Topic=(gang)
70. Topic=(homicide*)
71. Topic=(violence)
72. Topic=(violence)
73. Topic=(violent)
74. Or/41-73

75. Topic=(school NEAR/1 violence)
76. Topic=(juvenile NEAR/1 delinquent)
77. Topic=(juvenile NEAR/1 delinquency)
78. Or/75-77

79. Topic=(deprived NEAR/1 (country OR nation*))
80. Topic=(("less developed") NEAR/1 (country OR nation*))
81. Topic=(("under developed") NEAR/1 (country OR nation*))
82. Topic=(("low income") NEAR/1 (economy or economies))
83. Topic=(("under developed") NEAR/1 (economy or economies))
84. Topic=(("middle income") NEAR/1 (economy or economies))
85. Topic=(("less developed") NEAR/1 (economy or economies))
86. Topic=(("under developed") NEAR/1 (economy or economies))
87. Topic=((developing NEAR/1 economy) (economy or economies))
88. Topic=(underdeveloped NEAR/1 (economy or economies))
89. Topic=((poor) NEAR/1 (country OR nation*))
90. Topic=((developing NEAR/1 nation*))
91. Topic=((developing NEAR/1 region*))
92. Topic=((developing NEAR/1 country*))
93. Topic=((developing NEAR/1 world))
94. Topic=((developing) NEAR/1 (economy or economies))
95. Topic=(third NEAR/1 world)
96. Topic=(Afghanistan or Albania or Algeria or Angola or Antigua or Barbuda or Argentina or Armenia or Armenian or Aruba or Azerbaijan or Bahrain or Bangladesh or Barbados or Benin or Byelorussian or Belarus or Belorussian or Belorussia or Belize or Bhutan or Bolivia or Bosnia or Herzegovina or Hercegovina or Botswana or Brasil or Brazil or Bulgaria or Burkina Faso or Burkina Fasso or Upper Volta or Burundi or Cambodia or Khmer Republic or Kampuchea or Cameroon or Cameroons or Cameroon or Camerons or Cape Verde or Central African Republic or Chad or Chile or China or Colombia or Comoros or Comoros Islands or Comores or Mayotte or Congo or Zaire or Costa Rica or Cote d'Ivoire or Ivory Coast or Croatia or Cuba or Cyprus or Czechoslovakia or Czech Republic or Slovakia or Slovak Republic or Djibouti or French Somaliland or Dominica or Dominican Republic or East Timor or East Timur or Timor Leste or Ecuador or Egypt or United Arab Republic or El Salvador or Eritrea or Estonia or Ethiopia or Fiji or Gabon or Gabonese Republic or Gambia or Gana or Georgia Republic or Georgian Republic or Ghana or Gold Coast or Greece or Grenada or Guatemala or Guinea or Guam or Guiana or Guyana or Haiti or Honduras or Hungary or India or Maldives or Indonesia or Iran or Iraq or Isle of Man or Jamaica or Jordan or Kazakhstan or Kazakh or Kenya or Kiribati or Korea or Kosowo or Kyrgyzstan or Kirghizia or Kyrgyz Republic or Kirghiz or Kirgistan or Lao PDR or Laos or Latvia or Lebanon or Lesotho or Basutoland or Liberia or Libya or Lithuania or Macedonia or Madagascar or Malagasy Republic or Malaysia
or Malaya or Malay or Sarawak or Malai or Nyasaland or Mali or Malta or Marshall Islands or Mauritania or Mauritius or Agalega Islands or Mexico or Micronesia or Middle East or Moldova or Moldavia or Mongolia or Montenegro or Morocco or Ifni or Mozambique or Myanmar or Myanma or Burma or Namibia or Nepal or Netherlands Antilles or New Caledonia or Nicaragua or Niger or Nigeria or Northern Mariana Islands or Oman or Muscat or Pakistan or Palau or Palestine or Panama or Paraguay or Peru or Philippines or Philippines or Philipines or Poland or Portugal or Puerto Rico or Romania or Rumania or Roumania or Russia or Russian or Rwanda or Ruanda or Saint Kitts or St Kitts or Nevis or Saint Lucia or St Lucia or Saint Vincent or St Vincent or Grenadines or Samoa or Samoan Islands or Navigator Island or Navigator Islands or Sao Tome or Saudi Arabia or Senegal or Serbia or Montenegro or Seychelles or Sierra Leone or Slovenia or Sri Lanka or Ceylon or Solomon Islands or Somalia or South Africa or Sudan or Surinam or Swaziland or Syria or Tajikistan or Tadzhikistan or Tadjikistan or Bangladesh or Tanzania or Thailand or Togo or Togolese Republic or Tonga or Trinidad or Tobago or Tunisia or Turkey or Turkmenistan or Turkmen or Uganda or Ukraine or Uruguay or USSR or Soviet Union or Union of Soviet Socialist Republics or Uzbekistan or Argentina or New Hebrides or Venezuela or Vietnam or Viet Nam or West Bank or Yemen or Yugoslavia or Somalia or Zimbabwe or Rhodesia)

97. Topic=(Africa or "Latin America" or "South America" or Caribbean or "West Indies" or "Eastern Europe" or Soviet or Arab or "Middle East" or "Latin America" or "Central America")
98. Or/79-97
99. 40 and 74
100. 99 and 98
101. 78 and 98

JOLIS (IMF, World Bank and International Finance Corporation) http://external.worldbankimflib.org/uhb/bin/cgisirsi/?ps=Uvm3MkrFSe/JL/0/49 (aggression OR violence OR homicide OR gang OR bully OR crime OR “juvenile delinquency” OR “conduct problem” OR “conduct disorder” OR “behavior problem” OR “behavior disorder”)

AND
(adolescent OR child OR youth OR student OR teen OR boy OR girl OR pupil OR youngster OR juvenile OR infant)

World Bank https://openknowledge.worldbank.org/discover?scope=%2F&query=%28aggression+OR+violence+OR+homicide+OR+gang+OR+bully+OR+crime+OR+%22juvenile+delinquency%22+OR+%22conduct+problem%22+OR+%22conduct+disorder%22+OR+%22behavior+problem%22+OR+%22behavior+disorder%22%29+AND+%28adolescent+OR+child+OR+youth+OR+student+OR+teen+OR+boy+OR+girl+OR+pupil+OR+youngster+OR+juvenile+OR+infant%29&submit=Go (aggression OR violence OR homicide OR gang OR bully OR crime OR “juvenile delinquency” OR “conduct problem” OR “conduct disorder” OR “behavior problem” OR “behavior disorder”) AND (adolescent OR child OR youth OR student OR teen OR boy OR girl OR pupil OR youngster OR juvenile OR infant)

LILACS RUN 1 (child OR niño OR criança OR infant OR lactante OR lactente OR Adolescent OR Adolescente OR “Child Psychiatry” OR “Psiquiatría Infantil” OR “Psiquiatria Infantil” OR “Child Behavior” OR “Conducta Infantil” OR “Comportamento Infantil” OR “Adolescent Behavior” OR “Conducta del Adolescente” OR “Comportamiento del Adolescente” OR Adolescent Development” OR “Desarrollo del Adolescente” OR “Desenvolvimento do Adolescente” OR “Adolescent Behavior” OR “Conducta del Adolescente” OR “Comportamento do Adolescente”)

[Subject descriptor]
AND
gang OR gangs OR pandilla OR quadrilha OR crimes OR criminal OR Crimen OR Crime OR (antisocial AND behavio$r) OR antisocial OR anti-social OR “antisocial behavio$r” OR “anti-social behavior” OR “comportamento anti-social” OR “conducta anti-social” OR violen$s OR Violencia OR Violência OR violence OR violent OR violen$s OR bully$ OR “Acoso Escolar” OR Bullying OR aggress$ OR aggression OR Agresión OR Agressão OR Homicidio OR Homicídio OR Acoso Escolar OR bullying OR domestic violence OR Violencia Doméstica OR Violência Doméstica OR conducta antisocial

[Words]

370
RUN 2
child OR children OR adolescent OR Adolescente OR child$ OR adolescente OR youth$ OR student$ OR teen$ OR boy$ OR girl$ OR pupil$ OR youngster$ OR juvenile$ OR infant$ OR infant$ OR baby OR babys OR preschool OR preschool$ OR criança OR infant OR infant$ OR lactante OR lactente OR neonat$ OR baby OR babies OR kid OR kids OR toddler$ OR júvenes OR niña OR niño OR criança OR new born
[Words]
AND
“Domestic Violence” OR “Violencia Doméstica” OR “Violência Doméstica” OR “Social Behavior Disorders” OR “Trastorno de la Conducta Social” OR “Transtornos do Comportamento Social” OR aggression OR Agresión OR Agressão OR Homicidio OR Homicídio OR Acoso Escolar OR Bullying OR “oppositional defiant disorder” OR “trastorno desafiante por oposición” OR “trastorno desafiador de oposición” OR “conduct disorder” OR “Trastorno del Comportamiento” OR “Transtorno da Conduita” OR “trastorno desafiador-opositivo” OR “conducta antisocial” OR “transtorno da conduta” OR “transtorno da personalidade anti-social” OR “Transtornos do Comportamento”
[Subject descriptor]

228
RUN 3
child OR niño OR criança OR infant OR lactante OR lactente OR Adolescent OR Adolescente OR “Child Psychiatry” OR “Psiquiatria Infantil” OR “Psiquiatria Infantil” OR “Child Behavior” OR “Conducta Infantil” OR “Comportamento Infantil” OR “Adolescent Behavior” OR “Conducta del Adolescente” OR “Comportamento do Adolescente” OR “adolescent development” OR “Desarrollo del Adolescente” OR “Desenvolvimento do Adolescente” OR “adolescent behavior” OR “Conducta del Adolescente” OR “Psiquiatria del Adolescente” OR “Psiquiatria do Adolescente”
[Subject descriptor]
AND
“Domestic Violence” OR “Violencia Doméstica” OR “Violência Doméstica” OR “Social Behavior Disorders” OR “Trastorno de la Conducta Social” OR “Transtornos do Comportamento Social” OR aggression OR Agresión OR Agressão OR Homicidio OR Homicídio OR Acoso Escolar OR Bullying OR “oppositional defiant disorder” OR “trastorno desafiante por oposición” OR “trastorno desafiador de oposición” OR “conduct disorder” OR “Trastorno del Comportamiento” OR “Transtorno da Conduita” OR “trastorno desafiador-opositivo” OR “conducta antisocial” OR “transtorno da conduta” OR “transtorno da personalidade anti-social” OR “Transtornos do Comportamento”
[Subject descriptor]

4538
RUN 4
child OR children OR adolescent OR Adolescente OR child$ OR adolescente OR youth$ OR student$ OR teen$ OR boy$ OR girl$ OR pupil$ OR youngster$ OR juvenile$ OR infant$ OR infant$ OR baby OR babies OR preschool OR preschool$ OR criança OR infant OR infants OR lactante OR lactente OR
neonat$ OR baby OR babies OR kid OR kids OR toddler$ OR jóvenes OR niña OR niño OR criança OR newborn
[Words]
AND
gang OR gangs OR pandilla OR quadrilha OR crimes OR criminal OR Crimen OR Crime OR antisocial OR anti-social OR “antisocial behavior” OR “anti-social behavior” OR “comportamento anti-social” OR “conducta anti-social” OR “conducta antisocial” OR violen$ OR Violencia OR Violência OR violence OR violent OR bully$ OR “Acoso Escolar” OR Bullying OR aggression OR Agresión OR Agressão OR Homicidio OR Homicídio OR Acoso Escolar OR “domestic violence” OR “Violencia Doméstica” OR “Violência Doméstica”
[Words]
NOT
liposarcoma

473
RUN 5
“Child Behavior Disorders” OR “delinquencia” OR “delinquencia femenina” OR “delinquencia juvenil” OR delincuencial or delincuenciales or delincuente or delincuentes OR “juvenile delinquency” OR delincuen$ OR “Delincuencia Juvenil” OR “Delinquência Juvenil” OR “Transtornos do Comportamento Infantil” OR Delinquencia or Delinquen$ or “Trastornos de la Conducta Infantil” or Transtornos do “Comportamento Infantil”
[Words]

SCIELO

RUN 1 - 60
child OR niño OR criança OR infant OR lactante OR lactente OR Adolescent OR Adolescente OR child OR children OR adolescent OR child$ OR adolescent$ OR youth$ OR student$ OR teen$ OR boy$ OR girl$ OR pupil$ OR younger$ OR juvenile$ OR infant$ OR infant$ OR baby OR babies OR preschool OR preschool$ OR criança OR infant OR infants OR lactante OR lactente OR neonat$ OR baby OR babies OR kid OR kids OR toddler$ OR jóvenes OR niña OR niño OR criança OR newborn
[All indexes]
AND
“Acoso Escolar” OR “Violência Doméstica” OR Transtornos do Comportamento OR “Transtornos do Comportamento Social” OR Agressão OR Homicídios OR Bullying OR “trastorno desafiador-opositivo” OR “Transtorno da Conduta” OR “conducta antisocial” or “trastorno da conduta” OR “transtorno da personalidade anti-social”
[Subject descriptor]

RUN 2 - 1189
child OR niño OR criança OR infant OR lactante OR lactente OR Adolescent OR Adolescente OR child OR children OR adolescent OR child$ OR adolescent$ OR youth$ OR student$ OR teen$ OR boy$ OR girl$ OR pupil$ OR younger$ OR juvenile$ OR infant$ OR infan$ OR baby OR babies OR preschool OR preschool$ OR criança OR infant OR infants OR lactante OR lactente OR neonat$ OR baby OR babies OR kid OR kids OR toddler$ OR jóvenes OR niña OR niño OR criança OR newborn
[All indexes]
AND
gang OR gangs OR pandilla OR quadrilha OR crimes OR criminal OR crime OR “comportamento anti-social” OR “conducta anti-social” OR violence OR violen$ OR Violencia OR Violência OR violent OR bully$ OR aggress$ OR aggression OR Agresión OR Agressão OR Homicidio OR Homicídio OR Acoso Escolar OR bullying OR domestic violence OR Violência Doméstica OR Violência Doméstica OR conducta antisocial OR “Transtorno da Conduta” OR “transtorno desafiador de oposição” OR “trastorno da personalidade anti-social”OR “Transtornos do Comportamento”
[All indexes]
APPENDIX B: DOCUMENT CODING PROTOCOL

Reference information

1. Document ID
2. Study author/s
3. Study title
4. Publication year
5. Full APA-style reference
6. Reference type:
   a. Book
   b. Journal article (peer reviewed)
   c. Dissertation or thesis
   d. Government report
   e. Police report
   f. Technical report
   g. Conference paper
   h. Other (specify)_____________________
7. Coder's name; date coded

Study details

8. Country of intervention _________________________
9. Document language ___________________________
10. Date of research
   a. Start: ____________
   b. Finish: ____________
11. Source of funding for study
   a. Government
   b. Foreign government
   c. Local university/research body
   d. Foreign university/research body
   e. Other _______________________
12. Term/s used by author to describe gang
   a. Gang
   b. Pandilla
c. Maras
d. Street children
e. Other __________________

13. Author definition of gang
a. Eurogang definition
b. Not specified
c. Other ____________

14. Sample age ____________

15. Intervention name ____________________________

16. Intervention strategy _________________________

17. Intervention design__________________________

18. Level of intervention
a. Primary
b. Secondary
c. Tertiary
d. Combination of above categories

19. Bodies involved in implementation (tick all applicable)
a. Police/Justice system
b. Health Service
c. Other government departments
d. University/research agency
e. Other ____________________

20. Evaluated by ____________________________

21. Conflict context?
a. Yes
b. No

22. Other relevant contextual information?
a. Yes (describe) ____________________________
b. No

23. Issues in implementation?
a. Yes (describe) ____________________________
b. No problems
c. No information included

24. Ethical issues?
Methodology

25. Type of study
   a. randomized experiment
   b. randomized experiment with units of analysis discrepancy or very small number of aggregate units
   c. quasi-experiment: interrupted time series
   d. quasi-experiment: regression discontinuity
   e. quasi-experiment: nonequivalent comparison group case control design
   f. Within-group comparison (i.e., pretest-posttest)

26. Randomisation to the comparison made in the effect size
   a. Participants were randomly assigned to treatment and comparison conditions
   b. participants were haphazardly assigned to treatment and comparison conditions
   c. participants were neither randomly nor haphazardly assigned to treatment and comparison conditions
   d. Based on a within-participants comparison (e.g., a pretest-posttest design following the same participants over time)
   e. Unknown

27. Comparison group present?
   a. Yes (matched by) _________________________________
   b. No

28. Similarity of the control group
   a. Internal — Another group from the same pool of Ss — all participants started off as part of one group.
   b. External—A group from a patently different pool of participants
   c. Archival/historical—Data taken from past study (e.g., past experiment; normative data on a test)
   d. Other _________________________________
   e. Unknown.

29. Type of Comparison condition
a. Wait List Control Group 

b. No Treatment Control Group 

c. Placebo Control Group 

d. “Treatment as usual” 

e. An alternative treatment 

30. Unit of treatment ________________

31. Unit of analysis ________________

32. Sample size 
   a. Total sample size ______________________
   b. Sample size of comparison group ______________________
   c. Sample size of intervention group ______________________
   d. Sample size of treatment group for this effect size __________
   e. Sample size of treatment comparison for this effect size ______

33. Was attrition a problem? 
   a. Yes (describe) __________________
   b. No
   c. Not applicable

34. Initial response rate________________

**Risk of Bias (Use the IDCG Risk of Bias checklist to help answer 35-42):**

35. Mechanism of assignment: was the allocation or identification mechanism able to control for selection bias? 
   a. Yes 
   b. No 
   c. Unclear

36. Group equivalence: was the method of analysis executed adequately to ensure comparability of groups throughout the study and prevent confounding? 
   a. Yes 
   b. No 
   c. Unclear

37. Hawthorne and John Henry effects: was the process of being observed causing motivation bias? 
   a. Yes 
   b. No
38. Spill-overs: was the study adequately protected against performance bias?
   a. Yes
   b. No
   c. Unclear

39. Selective outcome reporting: was the study free from outcome reporting bias?
   a. Yes
   b. No
   c. Unclear

40. Selective analysis reporting: was the study free from analysis reporting bias?
   a. Yes
   b. No
   c. Unclear

41. Other: was the study free from other sources of bias?
   a. Yes
   b. No
   c. Unclear

42. Confidence intervals
   a. Yes
   b. No
   c. Unclear

43. Sample age _____________________

44. Sample gender
   a. Male
   b. Female
   c. Mixed

45. Sample socio-economic status
   a. Low
   b. Average
   c. High
   d. Mixed
   e. Other _____________________

Outcomes (complete for each outcome reported)

46. Outcome ______________________________
47. Conceptual definition of outcome __________________________

48. Operation definition __________________________

49. Where was the outcome variable obtained?
   a. Official data (government/police)
   b. Self-reported
   c. Peer-reported
   d. Family-reported
   e. Practitioner-reported (including school)
   f. Other __________________________

50. Raw difference favours (i.e. shows more success for):
   (a) Treatment group
   (b) Control group
   (c) Neither (exactly equal)
   (d) Cannot tell

51. Did a test of statistical significance indicate statistically significant differences between groups/time points?
   a. Yes
   b. No
   c. Can’t tell
   d. N/A (no testing completed)

52. Was a standardized effect size reported?
   a. Yes
   b. No

   If Yes:
   53. Effect size measure________________
   54. Effect size________________
   55. Standard error of effect size________________
   56. Effect size reported on page number________________

   If No:
   57. Are data available to calculate effect size?
      a. Yes
      b. No

   58. Type of data effect size can be calculated from:
      a. Means and standard deviations
b. Frequencies or proportions (dichotomous)
c. Frequencies or proportions (polychotomous)
d. Unadjusted correlation coefficient
e. Multiple regression coefficients (unstandardized)
f. Multiple regression coefficients (standardized)
g. t-value or F-value
h. Chi-square (df=1)
i. Other (specify) __________

**Means and Standard Deviations**

59. Treatment group mean. _____
60. Control group mean. _____
61. Treatment group standard deviation. _____
62. Control group standard deviation. _____

**Proportions or frequencies**

63. \( n \) of treatment group with a successful outcome. _____
64. \( n \) of control group with a successful outcome. _____
65. Proportion of treatment group with a successful outcome. _____
66. Proportion of treatment group with a successful outcome. _____

**Regression coefficients and correlations**

67. Unadjusted correlation coefficient___________
68. Standardized regression coefficient ______
69. Unstandardized regression coefficient_______
70. Standard deviation of predictor ______
71. Control variables _________________________________

**Significance Tests**

72. \( t \)-value _____
73. \( F \)-value _____
74. Chi-square value \((df=1)\) _____

**Calculated Effect Size**

75. Effect size ______
76. Standard error of effect size _____

**Authors conclusion**

77. What did the authors conclude about the relationship?
   1. Program reduced gang membership
2 Program increased gang membership
3 Program had no effect on gang membership
4 Unclear/no conclusion stated by authors
APPENDIX C: IDCG RISK OF BIAS TOOL

Tool to assess risk of bias and internal validity of social experiments and quasi-experiments

The following tool enables the consistent assessment of internal validity of social experiments and quasi-experiments including randomised control trials (RCTs), regression discontinuity designs (RDDs), non-randomised studies based on participant self-selection (panel data models, propensity score and covariate matching, and cross-sectional regression), and studies using instrumental variables estimation for causal identification. The tool consists of eight evaluation criteria to identify threats to validity arising due to the following sources: selection bias, confounding, motivation bias, performance bias, outcome reporting bias, analysis reporting bias, other sources of bias, and threats to the correct calculation of statistical significance of the effect. Application of the tool is likely to require advanced knowledge of statistics and econometrics.

1. Mechanism of assignment: was the allocation or identification mechanism able to control for selection bias?

   a) For Randomised assignment (RCTs),

   Score “YES” if:
   - a random component in the sequence generation process is described (e.g. referring to a random number table);
   - and if the unit of allocation was at group level (geographical/ social/ institutional unit) and allocation was performed on all units at the start of the study,
   - or if the unit of allocation was by beneficiary or group and there was some form of centralised allocation mechanism such as an on-site computer system;
   - and if the unit of allocation is based on a sufficiently large sample size to equate groups on average.

   Score “UNCLEAR” if:
   - the paper does not provide details on the randomisation process, or uses a quasi-randomization process for which it is not clear has generated allocations equivalent to true randomisation.

   Score “NO” if:
   1. the sample size is not sufficient or any failure in the allocation mechanism could affect the randomisation process.

---

5 The tool has been developed by Jorge Hombrados and Hugh Waddington, drawing on existing tools, in particular EPOC (n.d.), Higgins and Green (2011) and Coalition for Evidence-Based Policy (2010). Thanks to Richard Palmer-Jones, Maren Duvendack and Phil Davies for comments on previous drafts.

6 If a quasi-randomized assignment approach is used (e.g. alphabetical order), you must be sure that the process truly generates groupings equivalent to random assignment, to score “Yes” on this criteria. In order to assess the validity of the quasi-randomization process, the most important aspect is whether the assignment process might generate a correlation between participation status and other factors (e.g. gender, socio-economic status) determining outcomes; you may consider covariate balance in determining this (see question 2).

7 If the research has serious concerns with the validity of the randomisation process or the group equivalence completely fails, we recommend to assess the risk of bias of the study using the relevant questions for the appropriate methods of analysis (cross-sectional regressions, difference-in-difference, etc) rather than the RCTs questions.
b) For discontinuity assignment (Regression Discontinuity Designs)

Score “YES” if:
- allocation is made based on a pre-determined discontinuity on a continuous variable (regression discontinuity design) and blinded to participants or,
- if not blinded, individuals reasonably cannot affect the assignment variable in response to knowledge of the participation decision rule;
- and the sample size immediately at both sides of the cut-off point is sufficiently large to equate groups on average.

Score “UNCLEAR” if:
- the assignment variable is either non-blinded or it is unclear whether participants can affect it in response to knowledge of the allocation mechanism.

Score “NO” if:
- the sample size is not sufficient or
- there is evidence that participants altered the assignment variable prior to assignment.

8 If the research has serious concerns with the validity of the assignment process or the group equivalence completely fails, we recommend to assess the risk of bias of the study using the relevant questions for the appropriate methods of analysis (cross-sectional regressions, difference-in-difference, etc) rather than the RDDs questions.

9 Accounting for and matching on all relevant characteristics is usually only feasible when the programme allocation rule is known and there are no errors of targeting. It is unlikely that studies not based on randomisation or regression discontinuity can score “YES” on this criterion.

10 There are different ways in which covariates can be taken into account. Differences across groups in observable characteristics can be taken into account as covariates in the framework of a regression analysis or can be assessed by testing equality of means between groups. Differences in unobservable characteristics can be taken into account through the use of instrumental variables (see also question 1.d) or proxy variables in the framework of a regression analysis, or using a fixed effects or difference-in-differences model if the only characteristics which are unobserved are time-invariant.

c) For assignment based non-randomised programme placement and self-selection (studies using a matching strategy or regression analysis, excluding IV)

Score “YES” if:
- Participants and non-participants are either matched based on all relevant characteristics explaining participation and outcomes, or
- all relevant characteristics are accounted for.

Score “UNCLEAR” if:
1. it is not clear whether all relevant characteristics (only relevant time varying characteristics in the case of panel data regressions) are controlled.

Score “NO” if:
2. relevant characteristics are omitted from the analysis.

d) For identification based on an instrumental variable (IV estimation)

Score “YES” if:
- An appropriate instrumental variable is used which is exogenously generated: e.g. due to a ‘natural’ experiment or random allocation.

Score “UNCLEAR” if:
• the exogeneity of the instrument is unclear (both externally as well as why the variable should not enter by itself in the outcome equation).

Score “NO” otherwise.

2. Group equivalence: was the method of analysis executed adequately to ensure comparability of groups throughout the study and prevent confounding?

a) For randomised control trials (RCTs) and quasi-RCTs,
Score “YES” if:
• baseline characteristics of the study and control/comparisons are reported and overall\textsuperscript{12} similar based on t-test or ANOVA for equality of means across groups,
• or covariate differences are controlled using multivariate analysis;
• and the attrition rates (losses to follow up) are sufficiently low and similar in treatment and control, or the study assesses that loss to follow up units are random draws from the sample (e.g. by examining correlation with determinants of outcomes, in both treatment and comparison groups);
• and problems with cross-overs and drop outs are dealt with using intention-to-treat analysis or in the case of drop outs, by assessing whether the drop outs are random draws from the population;
• and, for cluster-assignment, authors control for external cluster-level factors that might confound the impact of the programme (e.g. weather, infrastructure, community fixed effects, etc) through multivariate analysis.

Score “UNCLEAR” if:
• insufficient details are provided on covariate differences or methods of adjustment;
• or insufficient details are provided on cluster controls.

Score “NO” otherwise.

b) For regression discontinuity designs (RDDs),
Score “YES” if:
1. the interval for selection of treatment and control group is reasonably small,
2. or authors have weighted the matches on their distance to the cut-off point,
3. and the mean of the covariates of the individuals immediately at both sides of the cut-off point (selected sample of participants and non-participants) are overall not statistically different based on t-test or ANOVA for equality of means,
4. or significant differences have been controlled in multivariate analysis;
5. and, for cluster-assignment, authors control for external cluster-level factors that might confound the impact of the programme (e.g. weather, infrastructure, community fixed effects, etc) through multivariate analysis.

Score “UNCLEAR” if:

\textsuperscript{11} Please note that when a), b) or f) score no or large differences in baseline characteristics, we suggest assessing risk of bias considering other study design (Diff-in-Diff, cross-sectional regression, instrumental variables)

\textsuperscript{12} Even in the context of RCTs, when randomisation is successful and carried out over sufficiently large assignment units, it is possible that small differences between groups remain for some covariates. In these cases, study authors should use appropriate multivariate methods to correcting for these differences.
there are covariate differences across individuals at both sides of the discontinuity which have not been controlled for using multivariate analysis, or if insufficient details are provided on controls, or if insufficient details are provided on cluster controls.

Score “NO” otherwise.

c) For non-randomised trials using difference-in-differences methods of analysis,

Score “YES” if:

- the authors use a difference-in-differences (or fixed effects) multivariate estimation method;
- the authors control for a comprehensive set of time-varying characteristics;\(^{13}\)
- and the attrition rate is sufficiently low and similar in treatment and control, or the study assesses that drop-outs are random draws from the sample (e.g. by examining correlation with determinants of outcomes, in both treatment and comparison groups);
- and, for cluster-assignment, authors control for external cluster-level factors that might confound the impact of the programme (e.g. weather, infrastructure, community fixed effects, etc) through multivariate analysis.

Score “UNCLEAR” if:

- insufficient details are provided,
- or if insufficient details are provided on cluster controls.

Score “NO” otherwise.

d) For statistical matching studies including propensity scores (PSM) and covariate matching.\(^{14}\)

Score “YES” if:

a) matching is either on baseline characteristics or time-invariant characteristics which cannot be affected by participation in the programme; and the variables used to match are relevant (e.g. demographic and socio-economic factors) to explain both participation and the outcome (so that there can be no evident differences across groups in variables that might explain outcomes) (see fn. 6).

b) In addition, for PSM Rosenbaum’s test suggests the results are not sensitive to the existence of hidden bias.

c) and, with the exception of Kernel matching, the means of the individual covariates are equated for treatment and comparison groups after matching;
- and, for cluster-assignment, authors control for external cluster-level factors that might confound the impact of the programme (e.g. weather, infrastructure, community fixed effects, etc) through multivariate or any appropriate analysis.

Score “UNCLEAR” if:

- relevant variables are not included in the matching equation, or if matching is based on characteristics collected at endline,

\(^{13}\) Knowing allocation rules for the programme – or even whether the non-participants were individuals that refused to participate in the programme, as opposed to individuals that were not given the opportunity to participate in the programme – can help in the assessment of whether the covariates accounted for in the regression capture all the relevant characteristics that explain differences between treatment and comparison.

\(^{14}\) Matching strategies are sometimes complemented with difference-in-difference regression estimation methods. This combination approach is superior since it only uses in the estimation the common support region of the sample size, reducing the likelihood of existence of time-variant unobservables differences across groups affecting outcome of interest and removing biases arising from time-invariant unobservable characteristics.
• or if insufficient details are provided on cluster controls.
Score “NO” otherwise.

e) For regression-based studies using cross sectional data (excluding IV)
Score “YES” if:
• the study controls for relevant confounders that may be correlated with both participation and explain outcomes (e.g. demographic and socio-economic factors at individual and community level) using multivariate methods with appropriate proxies for unobservable covariates (see fn. 6),
• and a Hausman test\(^{15}\) with an appropriate instrument suggests there is no evidence of endogeneity,
• and none of the covariate controls can be affected by participation;
• and either, only those observations in the region of common support for participants and non-participants in terms of covariates are used, or the distributions of covariates are balanced for the entire sample population across groups;
• and, for cluster-assignment, authors control particularly for external cluster-level factors that might confound the impact of the programme (e.g. weather, infrastructure, community fixed effects, etc) through multivariate analysis.
Score “UNCLEAR” if:
• relevant confounders are controlled but appropriate proxy variables or statistical tests are not reported,
• or if insufficient details are provided on cluster controls.
Score “NO” otherwise.

f) For instrumental variables approaches,
Score “YES” if:
• the instrumenting equation is significant at the level of F\(\geq 10\) (or if an F test is not reported, the authors report and assess whether the R-squared (goodness of fit) of the participation equation is sufficient for appropriate identification);
• the identifying instruments are individually significant (p\(\leq 0.01\)); for Heckman models, the identifiers are reported and significant (p\(\leq 0.05\));
• where at least two instruments are used, the authors report on an over-identifying test (p\(\leq 0.05\) is required to reject the null hypothesis); and none of the covariate controls can be affected by participation and the study convincingly assesses qualitatively why the instrument only affects the outcome via participation\(^{16}\).

---

\(^{15}\) The Hausman test explores endogeneity in the framework of regression by comparing whether the OLS and the IV approaches yield significantly different estimations. However, it plays a different role in the different methods of analysis. While in the OLS regression framework the Hausman test mainly explores endogeneity and therefore is related with the validity of the method, in IV approaches it explores whether the author has chosen the best available strategy for addressing causal attribution (since in the absence of endogeneity OLS yields more precise estimators) and therefore is more related with analysis reporting bias.

\(^{16}\) If the instrument is the random assignment of the treatment, the reviewer should also assess the quality and success of the randomisation procedure in part a).
• and, for cluster-assignment, authors particularly control for external cluster-level factors that might confound the impact of the programme (e.g. weather, infrastructure, community fixed effects, etc) through multivariate analysis.

Score “UNCLEAR” if:
• relevant confounders are controlled but appropriate statistical tests are not reported or exogeneity\(^\text{17}\) of the instrument is not convincing,
• or if insufficient details are provided on cluster controls (see category f) below.
Score “NO” otherwise.

3. Hawthorne and John Henry effects: was the process of being observed causing motivation bias?

Score “YES” if either:
  a) For data collected in the context of a particular intervention trial (randomised or non-randomised assignment), the authors state explicitly that the process of monitoring the intervention and outcome measurement is blinded, or argue convincingly why it is not likely that being monitored in ways that could affect the performance of participants in treatment and comparison groups in different ways.
  b) The study is based on data collected in the context of a survey, and not associated with a particular intervention trial, or data are collected in the context of a retrospective (ex post) evaluation.

Score “UNCLEAR” if:
  1) it is not clear whether the authors use an appropriate method to prevent Hawthorne and John Henry Effects (e.g. blinding of outcomes and, or enumerators, other methods to ensure consistent monitoring across groups).
Score “NO” otherwise.

4. Spill-overs: was the study adequately protected against performance bias?

Score “YES” if:
  2) the intervention is unlikely to spill-over to comparisons (e.g. participants and non-participants are geographically and/or socially separated from one another and general equilibrium effects are unlikely)\(^\text{18}\).

Score “UNCLEAR” if:
  3) spill-overs are not addressed clearly.
Score “NO” if:
  4) allocation was at individual or household level and there are likely spill-overs within households and communities which are not controlled for in the analysis;

\(^\text{17}\) An instrument is exogenous when it only affects the outcome of interest through affecting participation in the programme. Although when more than one instrument is available, statistical tests provide guidance on exogeneity (see background document), the assessment of exogeneity should be in any case done qualitatively. Indeed, complete exogeneity of the instrument is only feasible using randomised assignment in the context of an RCT with imperfect compliance, or an instrument identified in the context of a natural experiment.

\(^\text{18}\) Contamination, that is differential receipt of other interventions affecting outcome of interest in the control or comparison group, is potentially an important threat to the correct interpretation of study results and should be addressed via PICO and study coding.
5. Selective outcome reporting: was the study free from outcome reporting bias?

Score “YES” if:
- there is no evidence that outcomes were selectively reported (e.g. all relevant outcomes in the methods section are reported in the results section).

Score “NO” if:
- some important outcomes are subsequently omitted from the results or the significance and magnitude of important outcomes was not assessed.

Score “UNCLEAR” otherwise.

6. Selective analysis reporting: was the study free from analysis reporting bias?

Score “YES” if:
- authors use ‘common’ methods\(^\text{19}\) of estimation and the study does not suggest the existence of biased exploratory research methods\(^\text{20}\).

Score “NO” if:
- authors use uncommon or less rigorous estimation methods such as failure to conduct multivariate analysis for outcomes equations where it is has not been established that covariates are balanced.

See also the following for particular estimation methodologies.

For PSM and covariate matching, score “YES” if:
- Where over 10\% of participants fail to be matched, sensitivity analysis is used to re-estimate results using different matching methods (Kernel Matching techniques).
- For matching with replacement, no single observation in the control group is matched with a large number of observations in the treatment group.

Where not reported, score “UNCLEAR”. Otherwise, score “NO”.

For IV (including Heckman) models, score “YES” if:
- the authors test and report the results of a Hausman test for exogeneity (\(p \leq 0.05\) is required to reject the null hypothesis of exogeneity).
- the coefficient of the selectivity correction term (Rho) is significantly different from zero (\(P < 0.05\)) (Heckman approach).

Where not reported, score “UNCLEAR”. Otherwise, score “NO”.

For studies using multivariate regression analysis, score “YES” if:

---

\(^{19}\) ‘Common methods’ refers to the use of the most credible method of analysis to address attribution given the data available.

\(^{20}\) A comprehensive assessment of the existence of ‘data mining’ is not feasible particularly in quasi-experimental designs where most studies do not have protocols and replication seems the only possible mechanism to examine rigorously the existence of data mining.
• authors conduct appropriate specification tests (e.g. reporting results of multicollinearity test, testing robustness of results to the inclusion of additional variables, etc).

Where not reported or not convincing, score “UNCLEAR”. Otherwise, Score “NO”.

7. Other: was the study free from other sources of bias?

Important additional sources of bias may include: concerns about blinding of outcome assessors or data analysts; concerns about blinding of beneficiaries so that expectations, rather than the intervention mechanisms, are driving results (detection bias or placebo effects)\(^{21}\); concerns about courtesy bias from outcomes collected through self-reporting; concerns about coherence of results; data on the baseline collected retrospectively; information is collected using an inappropriate instrument (or a different instrument/at different time/after different follow up period in the comparison and treatment groups).

Score “YES” if:
• the reported results do not suggest any other sources of bias.
Score “UNCLEAR” if:
• other important threats to validity may be present
Score “NO” if:
• it is clear that these threats to validity are present and not controlled for.
•

8. Confidence intervals

NOTE: for full internal validity assessment – ie risk of bias in effects and precision based on true confidence intervals (Type I error, Type II error) – assessment should include the following:

a) For studies using parametric regression methods such as OLS (distribution of error term, and heteroscedasticity):

Score “YES” if:
• the authors test and fail to reject the null of homoscedasticity (e.g. through a Breusch-Pagan test for heteroscedasticity (\(p>0.05\)) and test for the assumed error distribution (e.g. Kolmogorov-Smirnov test for non-normality (\(p>0.05\)))
• or if the test suggests the existence of heterogeneity or non-normality, the study corrects for them (e.g. use of log transformation in the dependent variable).

Score “UNCLEAR” if:
• the results of any test are not reported.
Score “NO” otherwise\(^{22}\).

b) If, despite large effects, the study fails to find the effects significant (Power of the study),

\(^{21}\) All interventions may create expectations (placebo effects), which might confound causal mechanisms. In social interventions, which usually require behaviour change from participants, expectations may form an important component of the intervention, so that isolating expectation effects from other mechanisms may be less relevant.

\(^{22}\) Standard errors may be inflated in parametric approaches if the intervention does not have a homogeneous effect across the whole sample population, and the authors fail to conduct appropriate sub-group analyses.
Score “YES” if:

- the sample size is enough to detect a relevant significant effect.

Score “UNCLEAR” if:

- it is not clear whether the sample size is sufficiently large to detect medium or large significant effects.

Score “NO” if:

- the sample size is not sufficiently large to detect medium or large significant effects.

c) For clustered studies (unit of analysis error),

Score “YES” if:

- the analysis is carried out at the relevant unit of treatment assignment,
- or the study accounts for lack of independence between observations within assignment clusters.

Score “UNCLEAR” if:

1. the study does not report enough information on the unit of treatment assignment.

Score “NO” if:

2. the analysis is carried out at a different unit than the assignment.
APPENDIX D: CRITICAL APPRAISAL TOOL FOR QUANTITATIVE, QUALITATIVE, AND PROCESS EVALUATION STUDIES

Adapted from the Critical Appraisal Skills Programme (CASP) Qualitative Research Checklist 31.05.13

1. Is the research aim clearly stated? (Yes/No)
2. Is there a clear link to relevant literature/theoretical framework? (Yes/No)
3. Is the study context described? (Yes/No)
4. Is the research design appropriate to answer the research question? (Yes/No)
5. Is the sampling procedure clearly described? (Yes/No)
6. Was the sampling strategy appropriate to the aims of the research? (Yes/No/Can’t tell)
7. Are sample characteristics clearly reported? (eg. size, location, sample demographics) (Yes/No)
8. Are data collection methods clearly reported? (eg. focus group, survey, semi-structured interview, computer assisted telephone interview) (Yes/No)
9. Are data recording methods clearly reported? (eg. video, paper survey, notes) (Yes/No)
10. Were the data collection methods appropriate to the aims of the research? (Yes/No/Can’t tell)
11. Are methods of analysis explicitly stated? (Yes/No)
12. Are the analyses clearly presented? (Yes/No)
13. Were the analyses sufficiently rigorous? (Yes/No/Can’t tell)
14. Was triangulation applied (data, investigator, theory or methodological)? (Yes/No/Can’t tell)
15. Are the conclusions clearly presented? (Yes/No)
16. Is the relationship between researchers and participants (and any potential for conflict of interest) explicitly discussed? (Yes/No)
17. Were conflict of interest issues appropriately considered? (Yes/No/Can’t tell)
18. Are ethical considerations related to the research discussed? (Yes/No)
19. Were ethical issues related to the research appropriately considered? (Yes/No/Can’t tell)
APPENDIX E: ANNOTATED BIBLIOGRAPHY OF STUDIES INCLUDED IN THE THEMATIC SYNTHESIS


Population

Former gang members in Guatemala, El Salvador, and Honduras.

Intervention

Brenneman (2009) evaluates the impact of evangelical conversion on gang exit. The Catholic faith predominates in Central and Latin America; however, the Pentecostal Church has a relatively large following throughout the 'Northern Triangle'. Catholics “have tended to found programs and invest in approaches that promote gang prevention through social programs and community development, while Evangelicals have tended almost exclusively toward promoting gang exit, especially by means of religious conversion” (Brenneman, 2009: 23). Further, the use of former gang members to recruit to the program (in this case the Church) is a cornerstone of the Pentecostal Church’s approach to recruiting new members to leave the gang and join the Church (Brenneman, 2009:10). Brenneman points out that none of his interviewees had chosen to “embrace Catholicism as a means of addressing the challenge to unbecoming a homie. Perhaps this finding should come as no surprise since Catholic gang exit initiatives are relatively few” (Brenneman, 2009: 23).

Study design

Brenneman (2009) interviewed a total of 63 former gang members (59 men and 4 women) in the “Northern Triangle” of Central America (Guatemala, El Salvador and Honduras) where gang violence is pervasive. He used a variety of means to access former gang members, including via trusted gatekeepers such as priests, pastors, and government rehabilitation officers in evangelical and Catholic organizations, non-religious NGOs, prisons and dry-out centers. He used a snowball sampling technique to access additional participants. He notes that while it would have been impossible to generate a random sample, he aimed to access a ‘representative sample’ which was not ‘overly biased’ towards toward religious ex-gang members. He also spent five weeks at a tattoo-removal clinic and interviewed all ex-gang member clients who passed through the clinic. He interviewed more than 30 experts and practitioners working at 27 organizations and ministries aimed at reducing gang violence in order to “understand the broader social context affecting gang exit” (Brenneman, 2009: 12). He took extensive field notes during his visits to prisons and ‘red zone’ neighborhoods, and followed an “evangelistic campaign aimed specifically at ‘winning’ gang members to evangelical faith” (Brenneman, 2009: 11-12).

Brenneman’s (2009) analysis phase incorporated coding the data from the interview transcripts using qualitative data analysis software to increase rigor in the coding process. This coding process was left open to allow for unexpected themes or patterns to emerge as
the analysis progressed. Each transcript was “coded on several dimensions such as religion, gang affiliation and family background. Transcripts were coded paragraph-by-paragraph and, in some cases, line-by-line for broad themes such as religion, family, and violence as well as more specific sub-themes such as “conversion” and “domestic violence” allowing for easy comparison across many texts and quick testing of assumptions. Memo-ing continued during the coding process. Coding also facilitated rapid retrieval” (Brenneman, 2009: 11-12).


**Population**

Communities and current gang members in three communities in Jamaica: August Town, Brown’s Town and Mountain View.

**Intervention**

The Peace Management Initiative (PMI) is active in a large number of communities in Jamaica. It was established by the Ministry of National Security in 2002 to “mitigate and defuse community violence” through mediation, counselling and social development (McLean & Lobban, 2009: 45). PMI directly targets youth involved in violence and the corner gangs associated with this violence, through a combination of mediation, counselling and therapy, and social development.

PMI incorporated structured activities aimed at bridging neighboring communities and bringing them together. It ensures a focus on youth through sport, theatre and musical events which span community boundaries (McLean & Lobban, 2009: 91). PMI also engages in dealing with the anger and trauma associated with the violence through counselling and therapy and has a trained social worker on its staff who leads a team of 30 volunteers to “conduct healing and reconciliation work with ex-combatants and victims of violence” (McLean & Lobban, 2009: 46). PMI “organizes retreats and field trips for gang members that take them out of the inner city and expose them to a range of different issues including conflict resolution, problem solving and leadership training” (McLean & Lobban, 2009: 46). PMI also has a focus on working with partners to provide employment and skills training and social development projects such as block making and poultry farming and “provides some small grants to gang members to help try and encourage them to develop an alternative livelihood to the gun” (McLean & Lobban, 2009: 46).

**Study design**

The PMI was evaluated along with 9 other programs that aimed to increase the safety and security of local communities in Jamaica; however, PMI was the only one of the 10 interventions which was eligible for this review due to its focus on gang members. The independent evaluation was commissioned by the Government of Jamaica and its International Development Partners to “determine the capacities required to implement the programs, the gaps in terms of issues being addressed, and the best institutional arrangements to ensure harmonization and sustainability” (McLean & Lobban, 2009: 6).
The evaluation comprised both a qualitative and quantitative component with the qualitative findings guiding the analysis, supported by quantitative survey data and police and hospital data. The evaluation aimed to establish “success factors, challenges, and lessons learnt” (McLean & Lobban, 2009: 21).

Quantitative

The evaluators examined police crime statistics and hospital data of violence-related injuries (VRIs) to explore the “correlation between the implementation of community security programs and levels of reported crimes and VRIs” (McLean & Lobban, 2009: 7). Detailed field research was undertaken in the three PMI communities. These communities were selected in consultation with the managers of the programs. This field research included a comprehensive household survey of 940 respondents in the three PMI areas (McLean & Lobban, 2009: 71). The survey aimed to gain an insight into citizen’s perceptions of security, social capital and project awareness (McLean & Lobban, 2009: 19).

The quantitative analyses were not conducted using an experimental or a quasi-experimental methodology that controlled for other potential causes of impact. This is particularly pertinent as there were multiple community safety interventions in these communities during the evaluation period, and any analysis without appropriate controls would not be able to attribute any change in crime or perceptions of crime to the PMI intervention. As a result, we do not present the quantitative findings that relate to effectiveness in this review.

Qualitative

A wide range of Jamaican Government and civil society stakeholders were interviewed as ‘key informants’ at the national and local level (McLean & Lobban, 2009: 6). Managers and staff of the program, as well as international stakeholders, were interviewed, and key program documentation was reviewed. Key informant interviews at the local level were conducted with local program implementing partners in three PMI communities, including local police, local members of the Community Development Committee, and political representatives. Focus groups were held in each community including with community leaders (e.g. religious leaders, teachers, local business owners); young men aged 17-25; beneficiaries of program services; and, either women or children (McLean & Lobban, 2009: 17-19).


Population

Ten neighbourhoods (barrios) in District VI of the City of Managua, Nicaragua.

Intervention

The program was a secondary preventive intervention that aimed to prevent youth violence
by targeting at-risk youth. The aim of the intervention was to create a platform or basis for adolescents to actively contribute to the development of, and reduction of violence within, their own communities. In this way, at-risk youth were targeted directly as active leaders of the clubs, and indirectly as participants in club activities promoted to youth within the community. Whilst the intervention was not specifically dedicated to the prevention of gang violence, gang violence was one key aspect of youth violence that the intervention aimed to address.

The intervention targeted a population of 150 adolescents who were selected and organized into ten clubs, one for each of the target barrios (Pastrán & Lanzas, 2006: 2). Each club had a common structure with six or seven elected members as leaders and Club members received training on how to elaborate a local agenda and turn this into an action plan (Pastrán & Lanzas, 2006: 24). The clubs held meetings focused on elaborating and negotiating a plan of action to improve their own communities (Pastrán & Lanzas, 2006: 24). They would make quarterly action plans with specified actions assigned to each of the members (Pastrán & Lanzas, 2006: 24). Each club was allocated a budget to support their action plan, administered by the funding consortium.

Adolescents from the target communities received training relevant to youth issues identified in an initial community scan. Some of the issues addressed in the training included: reproductive health, violence prevention, project design, and youth leadership (Pastrán & Lanzas, 2006: 27).

The youth leadership committee in each of the ten barrios formed dance groups and initiated a number of local community events with the support and engagement of other community leadership such as local associations and parents (Pastrán & Lanzas, 2006:25). They identified at-risk groups, promoted community activities such as local clean ups, proposed, and evaluated their own course of action. Additionally, they financially supported pre-existing community sports organizations that had previously had no support and formed a network that would promote intercommunity sports tournaments (Pastrán & Lanzas, 2006: 25).

**Study design**

The intervention was evaluated using a participatory methodology known as Systematization of Experiences Approach. Qualitative data was collected through two focus groups involving 12 participants each. In all, 18 females and 6 males aged between 13 and 22 from six of the study barrios participated in the focus groups (Pastrán & Lanzas, 2006: 19). The facilitators of the focus groups recorded the proceedings and also took notes and observations of the activities (Pastrán & Lanzas, 2006: 19). Interviews were conducted with six project stakeholders using a interview guide: three interviews were conducted with members of the community and parents in the project; one with a representative of the Mayor’s office in Managua; and two with sports coaches in the sports programs developed by the young participants in the program (Pastrán & Lanzas, 2006: 19). The evaluation team also
produced a document review using files from the project, forms, memoranda, and reports that provided an overview of the program experience. It also allowed the evaluators to distil the main themes of the intervention (Pastrán & Lanzas, 2006: 19).


**Population**

Current members of four active youth gangs (*manchas*) in Huamanga, Peru.

**Intervention**

As part of a much larger, longer-term participatory study the camping expedition “aimed to change the behaviour and attitudes of participants and to reduce intergang conflict by means of a quasi-field experiment” (Strocka, 2009: 105). The camping expedition took place over four days in a bush camp setting outside the city. It was designed to find “a way to break the vicious circle of violent intergroup conflict” and to “test whether enmity and violent conflict between *manchas* could be reduced by bringing them into contact with each other under non-violent and noncompetitive conditions”, involving social activities, cooperative activities such as cooking, games, music, drama and sport (Strocka, 2009: 108). The intervention design was guided by two key theories. Firstly, the design was influenced by the contact hypothesis of social psychologist Gordon Allport (1954), involving four situational conditions: equal status of groups; pursuit of common goals; intergroup cooperation; and, institutional support (Strocka: 108). Secondly, the intervention was influenced by the Robbers Cave Experiment (Sherif et al, 1961) which explored the conditions under which intergroup contact can improve intergroup relations (Strocka, 2009: 109).

Twenty-five (of an initial planned cohort of 40) male core *mancha* members from four *manchas*, aged between 15 and 29, participated in the camping intervention (Strocka, 2009: 113).

**Study design**

**Quantitative**

The camping field experiment had initially included a comparable control group. Although this group completed a pre-intervention questionnaire measure, and did not take part in the camp, the group could not be brought back to administer the post-intervention measure, and as a result, the controlled experiment did not go ahead (Strocka, 2009: 113). Consequently, any quantitative analyses cannot be seen as robust evaluations of the causal impact of the intervention.

**Qualitative**

The researchers conducted participant observation throughout the activities on the four days of the camp to record individual and intergroup interactions. An evaluation meeting was
conducted with each of the participating manchas on the last day of the camp. One mancha submitted a written evaluation (Strocka, 2009: 125). During the three months following the camping expedition, as part of ongoing fieldwork in the larger study, qualitative research involving participant observation and conversations with mancheros were ongoing. At the end of the larger project, the researcher kept in touch with some of the mancheros via email.